THE EVOLUTION OF ABLAUT FROM PROTO-INDO-EUROPEAN TO THE STRONG VERBS OF ENGLISH

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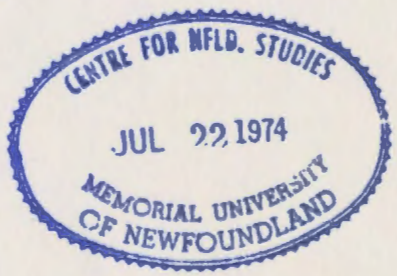
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PREFACE

The verbal system in Modern English consists of two main classes of verbs: 'strong' and 'weak'. The difference between the two lies principally in the formation of the past tense. The strong verbs form their past by changing the vowel of the root syllable according to a fixed pattern, called 'ablaut'. The weak verbs form their past by adding to the root syllable a dental suffix, -d or -t. The purpose of this dissertation is to show the diachronic development of the strong verb class from Proto-Indo-European to Modern English.

To do this, it is necessary to present a general description of the verbal system from which these strong verbs derived. In my efforts to present such an outline, I use examples from the Greek and Sanskrit verbal systems to represent the Proto-Indo-European verbal system. This eliminates the problem of having to deal with the complex reconstructions of Proto-Indo-European, which would be more confusing. In using such examples, I am not identifying the verbal systems of Greek and Sanskrit with that of Proto-Indo-European. Instead, I am offering Greek and Sanskrit as the most comprehensive parallels to the Proto-Indo-European verbal system.

My reason for not using Germanic examples at this point is because Germanic has not retained all the features of the parent language verbal system. Hence it can not offer a full set of paralleling forms. Germanic examples are given wherever possible. For the Greek and Sanskrit examples a Modern English translation is provided and underlined immediately following the word.

Once accounted for, ablaut is not difficult to trace in Germanic. It remains a strong polarizing force for this class of verbs right up to

Modern English. Here it parallels, although such verbs are fewer in number, the other Germanic languages; and unites in Germanic with other Proto-Indo-European languages to attest to the reality of ablaut in the parent language.

To the best of my knowledge, this is the first comprehensive study of ablaut in the Strong Verb system in its development from Proto-Indo-European into Modern English.

An index of the strong verb forms under the following headings: Proto-Indo-European, Common Germanic, Old English, Middle English and Modern English will follow at the end of this paper.

In my efforts to perform this task, I thank Dr. John Hewson, my thesis supervisor; and Dr. Vitus Bubenik, for his tremendous assistance in the first chapters of this paper.

B. O'D.

ABBREVIATIONS

I. Languages

Av.	Avestan
E.	English
Fr.	French
Ger.	German
Gk.	Greek
Gmc.	Germanic
Go.	Gothic
Icel.	Icelandic
L.	Latin
Lith.	Lithuanian
ME.	Middle English
MnE.	Modern English
MnG.	Modern German
MLG.	Middle Low German
Norw.	Norwegian
NWGmc.	NorthWest Germanic
OE.	Old English
OFris.	Old Frisian
OHG.	Old High German
OIcel.	Old Icelandic
OIr.	Old Irish
ON.	Old Norse
OS.	Old Saxon
OSw.	Old Swedish
PGmc.	Proto-Germanic
PIE	Proto-Indo-European
preGmc.	pre-Germanic
primGmc.	primitive-Germanic
Sk.	Sankrit
WGmc.	West Germanic

e.	early
l.	late

II. Grammatical

acc.	=	accusative
C	=	consonant
dat.	=	dative
gen.	=	genitive
inf.	=	infinitive
l	=	liquid
N	=	nasal
nom.	=	nominative
part.	=	participle
per.	=	person
pl.	=	plural
pres.	=	present
pret.	=	preterite
sg.	=	singular
subj.	=	subjunctive
wk.	=	weak
$\longrightarrow$, $\downarrow$	=	becomes, becoming
$\longleftarrow$	=	comes from, coming from
/	=	alternating with

III. Books

IG.	=	Indogermanische Grammatik by H. Hirt.

THE STRUCTURE OF THE PROTO-INDO-EUROPEAN VERBAL SYSTEM

The verbal system of Proto-Indo-European (hereafter PIE) presents two difficulties: one, it is a complicated system; two, it is a system based on a proto-language. Because it is complicated it is not easy to understand. But being a system of a reconstructed proto-language is entirely something else. By this it is meant that PIE has been reconstructed on the basis of daughter languages which were believed to have evolved from it. We cannot be sure that what we have reconstructed is an accurate representation of what may have actually existed.

Nominal and Verbal Roots

Not doubting any of the evidence supporting the existence of this proto-language, we find that the basic structural forms of PIE and its supposed daughter languages maybe divided into two distinctive classes. There are roots indicative of position, and those which relate to action or quality. "The former class are called demonstrative or pronominal roots; the latter class are styled predicative or verbal roots." (Whitney 1901:258)

Those roots referred to by Whitney as demonstrative are subjective in character. They do not relate to the inherent qualities of objects; but instead, identify them in their relationship to the speaker. Also they make a distinction between this particular object of attention here, as opposed to that particular object over there. Let us use the example: The boy owns the dog. Without making any reference to the inherent qualities of 'boy' or 'dog' we have made a distinction between them. One is the 'boy' here, and the other is the 'dog' there.

Also by their nature, demonstratives are not permanently attachable to certain objects, nor are they limited in their application. This class

has its roots in PIE as can be seen in these reconstructed forms: *es-, mankind; *ĝhem-, earth; *wedōr, water; *swēl-, sun; *wiro-, man; *ḱuon-, dog; *twō-mn, body.

The predicative or verbal roots, denoting action or quality, are seemingly more complicated. They are of objective importance, designating the properties and activities inherent in natural objects and prevailingly those that are of a sensible phenomenal character: such as modes of motion and physical excertion, of sound etc. Examples which have been reconstructed as belonging to the PIE predicative class and based upon their use in many of the present day languages are: *ei- and *ĝhei-, simple motion; *er-, swift motion; *sta-, standing; *sed-, sitting; *pleu-, flowing; *ed-, eating; *dhreĝ-, drinking; *bhlō-, blowing; *seik^{w}-, seeing; *speĝ-, speaking; *ghabh-, giving; *deik-, showing; *kel-, holding; *bher-, bearing; *bhendh-, binding; *stek-, strewing; *sḱī-, shining; *ghrō-, growing. (Pokorny 1959)

Verbal Systems and Verbal Forms

To ascribe to PIE the complicated tense system of Greek and Sanskrit would be a wrong assumption. A great deal of any present-day verbal system is due to secondary innovation: auxiliary verbs in Germanic. All that we can suggest is that PIE had verb forms that correspond to certain of those of Greek and Sanskrit: present, aorist, and perfect. To what extent tense function should be ascribed to these forms is very much a question for discussion. The stems of these verbs were strictly autonomous: Greek verbal root leip-, to leave had a present léipo, I am in the act of leaving; aorist élipon, I left (indicates purely and simply the historic fact); and the perfect lé-loipa, I have left (the act of leaving has been accomplished,

and the results at hand). The stems of these verbs apparently expressed not time, but the aspect under which the action was considered. We are not certain as to what extent 'tense' function should be ascribed to these forms. A certain tense nucleus is implied in their primary meaning, however.

The different functions and meaningful categories of the PIE verb will be examined under separate sub-headings. The reason is for better organization and hopefully clearer understanding. The different sub-headings to be dealt with are: voice, mood, tense/aspect, number, non-finite forms, and personal inflections.

1. VOICE: It is thought that the verbal system in PIE had two voices: an active and a medio-passive. "There was no specifically passive voice. Apart from the use of the middle in the passive sense, the forms used to express the passive are different in several languages and grew up independently." (Buck 1962:237) The forms that we have in Greek which express a 'full passive' are the result of secondary innovation. Cognates would not be found consistently in other languages to justify giving PIE a 'full passive'.

The Greek aorist in the verb kléptein, to steal from PIE *klep-y-ō has a passive. This aorist passive is eklápēn, to be stolen, from PIE medio-passive *e-klp-ēm. Another example, Greek paidéuō, to educate, has the aorist passive, epaidéuthēn.

Had there been a PIE passive, the following personal endings might be what we would expect to find:

singular:

1. -(th)ēm
2. -(th)ēs
3. -(th)ē

(It is interesting to note that the PIE forms clearly show ablaut: *klep-y-ō (full grade) vs *e-klp-ēm (zero grade). In the reduced form the glide was lost. There is an unusual alternation in Sanskrit:

singular:

3. bharati, he brings vs bhri-yá-te (present medio-passive)

plural:

3. bharanti, they bring vs bhri-yá-ntē (present medio-passive)

A reconstruction for PIE would give us the following form:

full grade		zero grade
*bhér-e-ti, he carries	vs	*bhr-y-é-tai, he carries himself
*bhér-o-nti, they carry	vs	*bhr-y-ó-ntai, they carry themselves

The distinctive middle voice in Greek and Sanskrit (which became distinctive only upon the development of a separate passive morphology) was used when the subject was intimately involved in the action; when the action was reflexive, possessive, or when the subject was neither fully agentive, nor patientive.

2. MOOD: The following moods of PIE may be reconstructed: the indicative, the subjunctive in -e/o-, the optative in -ye/i or -o-y-, and the imperative. "The characteristic of the optative of all the Indo-European stems of the athematic type was *-yē- in the singular and *-i- in the plural; this suffix was added to a stem with prefinal vocalism zero." (Meillet 1970:78)

The basic mood, the indicative, was used in PIE for objective statements. The subjunctive was used: i) to convey a wish, or in a

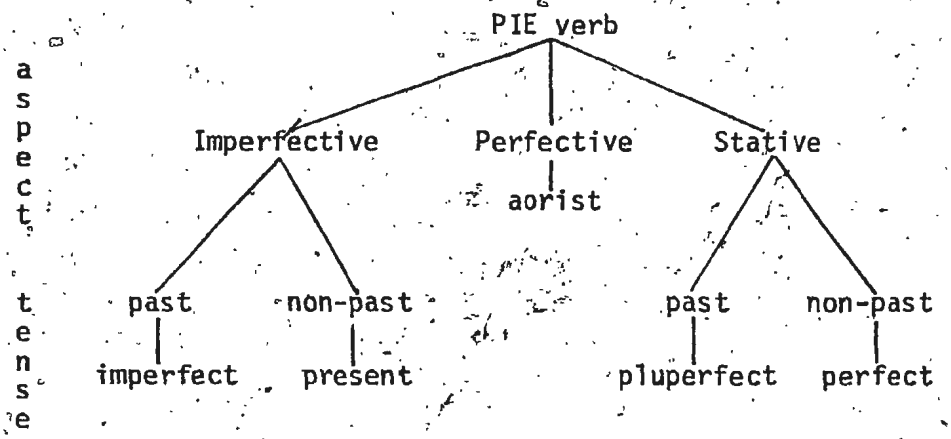
subordinate sentence of purpose; ii) in a deliberative function; iii) to indicate a contingency in the future. The optative was used: i) to indicate a wish; ii) to indicate that something would, could, or might happen; iii) to indicate authority. The imperative was used to impel, or with the negative to prohibit a certain action. "In Indo-European, where the verbal stem expressed the aspect of the envisaged action, each stem had an imperative; thus Greek opposes the present imperative leîpe, 'be in the act of leaving', to the aorist imperative lipe, 'leave' (pure and simple)." (Meillet 1970:68)

The subjunctive, optative, and imperative are not well developed in the perfect and s-aorist; but they are very complete in their development in the regular present and aorist.

3. TENSE/ASPECT: It is even more difficult to indicate to what extent 'tense' function can be attributed to PIE. Particularly when our correspondences of Greek and Sanskrit present, aorist, and perfect with PIE appear so weak. There is no doubt that it will always remain a question for debate.

Prokosch says, "In spite of numerous secondary developments, the general principle of the combination of tense and aspect in Greek and Sanskrit probably represent fairly closely the conditions of primitive Indo-European." (Prokosch 1939:146) So we can ascribe to PIE the following tenses: present, he leaves; aorist, he left; and perfect, he has accomplished the act of leaving. On the other hand, we can ascribe the following aspects: imperfective, he is carrying; perfective; he has carried; and stative, he carries (at a particular point in time).

In a diagrammatic representation, the PIE verb might look something like this:



The aorist indicative is always past and can never be spoken about in terms of non-past. So the aorist is analyzed not in the light of tense, but in that of aspect. Any complete, indicative event, must by logical necessity be past.

PIE tenses show differences in the aspect of the action, and to a certain extent also differences of time. The aspect of the action was noted by the different tense stems. In the perfect indicative the complete action from which the present result comes may be lost, so the form simply expresses only the present result: PIE *woida, I have seen; hence GK., οἶδα, I know (note L., vidi, I have seen).

Aspect is convenient, in its very vagueness, to cover certain essentially different 'non temporal' distinctions which are difficult to define and may differ considerably in other PIE languages.

Examples from the PIE verb are as follows:

	PRESENT (imperfective)	AORIST (perfective)	PERFECT (stative)
athematic root:	*és-ti he is (being)	*é-steA-t he has stood up	*woyd-e he knows (now)
thematic root:	*bhér-e-ti he is carrying	*é-ludh-e-t he has played	
reduplicated:	*sti-steA-ti he is standing	*é-we-wk^{W}-(e)-t he has spoken	*ste-stoA-e he stands (now)

These were not the only types of verb forms in PIE. There were also verbs whose roots were duplicated; these became known as reduplicated verbs. Other smaller classifications were: n-infix, new-suffix, ye-suffix, and s-suffix. A schematic formation might continue on the basis of the one above:

	PRESENT	AORIST	PERFECT
n-infix:	*yu-né-g-ti he is joining		
	*pu-né-A-ti he is cleaning		
new-suffix:	*r-new-ti he is moving		
ye-suffix:	*g^{W}m-yé-ti he is coming		
s-suffix:		*é-wēgh-s-t he has driven	

The athematic form *woyd-e, he knows (now); the thematic form *é-ludh-e-t, he has played; and the reduplicated form *é-we-wk^{W}-(e)-t, he has spoken are rare forms. Also it must be emphasized that it is extremely difficult to give accurate translations of these verbal forms.

There are several other present stem formations, many of which are further characterized by the suffix -ye/o, thus agreeing in inflection

with the simple ye-presents. Many of these suffixes have distinctive meanings, such as the suffix -éye/o 'causative or iterative'. It is quite common for a verb root to have more than one present formation: athematic *bhér-ti, he carries vs thematic *bhér-e-ti, he carries. The past tense formation of the present stem is the imperfect: *e-es-t, *e-sti-steA-t. The system is generally retained in Greek and Sanskrit. In these languages a pluperfect was also added and certain presents in -s(y)e- were assigned a 'future' value.

A closer examination of the tenses will show that the present indicative is non-past; while the imperfect indicative is past. The action of the present was immediate, sometimes future, or indefinite in time. The imperfect denoted time in the past, and continuous time in the past. The present presented the first person active singular in -ō: Gk., phérō, I carry. This type with the accented root vowel e has been maintained in most languages.

The second tense stem formation was the aorist. (Not all languages kept the aorist and the perfect separate, but Greek and Sanskrit did; Germanic did not.) Its action was momentary, and was seen in summary without reference to time duration. Evidently the action of the aorist is always in the past time.

The perfect in PIE was by far the most complicated. There is very little to offer for its reconstruction. We know that it was of the athematic type, and that it represented action completed, resulting from previous experience.

The only other tense to comment on at this stage is the formation which, traditionally in English, is called the future. "There was probably

no distinctive future tense, future time being expressed by the present indicative, by the subjunctive, or by certain s-formations with desiderative and future force." (Buck 1962:239)

4. NUMBER: PIE had singular, dual, and plural forms of the verb. The dual eventually disappeared in most languages. (It does, however, occur in Modern Welsh and some traces of it are to be found in ancient Germanic personal pronouns.) The evidence for the disappearance of the dual form is based on Greek where the use of the second and third persons can be seen. When dropped the dual forms were replaced by the plural in the nominal inflection.

5. NON-FINITE FORMS: The non-finite forms that we speak about here are the infinitive and participial forms. "The infinitive which just like the participle represents a 'second verb' in the sentence, may as a rule be traced back to deverbative abstracts. Where as the latter are to be considered as a derivational category, the infinitive is an inflectional form." (Kuryłowicz 1964:158) (Sometimes it is argued that the infinitive derived from a nominal case which had become attached to the verb.) Generally, the infinitive indicated the main idea of the verb independent of any other grammatical category. It did share some of the characteristics common to the verb: voice, aspect and some constructional formations with the direct object and with adverbs.

There was probably a complete system of participles in PIE. Because each verb had a double set of endings, active and middle, there would be two participles for each stem. Each stem with its own participle would have a case inflection which was both verbal and nominal.

Greek examples:

	tense/aspect	participle
active:	leípō, I leave leíponta, (acc. sg.)	leípōn, leaving
middle:	leípomai, I leave for myself, I am left	leipómenos, leaving for oneself, being left
perfect active:	léloipa, I have left	leloipós, having left
perfect passive:	léleimmai, I have been left	leleimménos, having been left

PIE also had participles (verbal adjectives) in -to-/-no- added directly to the root.

6. PERSONAL INFLECTIONS: In PIE the two major classes of verbs were: athematic and thematic. The basic difference to be found between these two classes was in the personal inflections.

The personal inflections in PIE consist of a double series of active and middle endings, called primary and secondary. These endings were so called from their distribution as they appeared most clearly in Greek and Sanskrit. The primary endings were used in the present indicative; the secondary were used in the imperfect and other tenses, the optative mood, and the subjunctive mood with some fluctation.

PIE Active Endings:

	primary		secondary
		singular	
1.	*-mi,	*-ō	*-m, *-m
2.	*-si		*-s
3.	*-ti		*-t

dual

1.	*-wes,	*-wos	*-we
2.	*-tes		*-tom
3.	*-tes		*-tēm

plural

1.	*-mes,	*-mos	*-me
2.	*-te		*-te
3.	*-nti		*-nt
	*-onti/ont		*-ent
	*-nti		*-nt

PIE Middle Endings:

	primary	secondary
	singular	
1.	*-ai	*-i
2.	*-sai	*-so, *-thes
3.	*-tai	*-to
	plural	
1.	*-medhai	*-medh
2.	*- ?	*- ?
3.	*-ntai	*-nto
	*-ntai	*-nto

The athematic verb attached personal endings to the bare root which had the strong grade form of the ablaut in the singular, but the weak grade in the dual and plural. Verbs of this class are often referred to as mi-verbs because the first person singular ends in *-mi.

Present:

singular

1.	*és-mi	
2.	*és-si,	*é-si
3.	*és-ti	

plural

1.	*s-més,	*s-mós
2.	*s-té	
3.	*s-énti	

Imperfect:

singular

1. *és-m
2. *és-s
3. *és-t

plural

1. *és-me
2. *és-te
3. *és-ent

In the thematic verb the stem vowel, which could be either of strong or weak grade of ablaut, remained unchanged throughout the present: in the latter case it is called the imperfect present; in the former case the aorist present. Thematic calls attention to the vowel that intervenes between the root and the personal ending which is subject to ablaut. In some primitive forms of PIE the same verb often had both a thematic and an athematic form. In such cases the thematic vowel had no function.

The present was formed by means of the thematic vowels e/o, which came between the root and the personal endings, and the accent was on the root or the thematic vowel according as the root contained the strong or weak grade of the ablaut. Verbs of this class are often referred to as ō-verbs because the first person singular ends in *-ō. The *-ō in *bherō is generally regarded as the personal ending, but in reality it is simply the lengthened ablaut-grade of the thematic vowel (possibly from contraction of thematic vowel and personal ending).

Present:

singular

1. *bhér-ō
2. *bhér-e-si
3. *bhér-e-ti

plural

1. *bhér-o-mes, (-mos)
2. *bhér-e-te
3. *bhér-o-nti

Imperfect:

singular

1. *é-bher-o-m
2. *é-bher-e-s
3. *é-bher-e-t

dual

1. ----------
2. *é-bher-e-tom
3. *é-bher-e-tēm

plural

1. *é-bher-o-mes
2. *é-bher-e-te
3. *é-bher-o-nt

The inflection of the perfect required special endings in PIE. The example given here presented in the singular the diphthong oi̯; but was ablauted to the zero grade in the plural. The data we have is really insufficient for a comprehensive reconstruction of the endings for the PIE perfect.

Greek:

singular	plural
1. oi̯da	ismen
2. oi̯stha	iste
3. oi̯de(n)	isāsin

Sanskrit:

singular	plural
1. vēda	vidma
2. vēttha	vidá
3. vēda	vidur

On the basis of what we have presented here, we can reconstruct the following forms for PIE perfect. These will be formed without any consideration given to laryngeal theories.

Perfect:

	singular	plural
1.	*woid-a	*wid-mé
2.	*woid-tha	*wid-(t)é
3.	*woid-e	*wid-r(ó)

If we attempt to reconstruct the perfect in PIE by taking into consideration some of the laryngeal theories, we might end up with something like this:

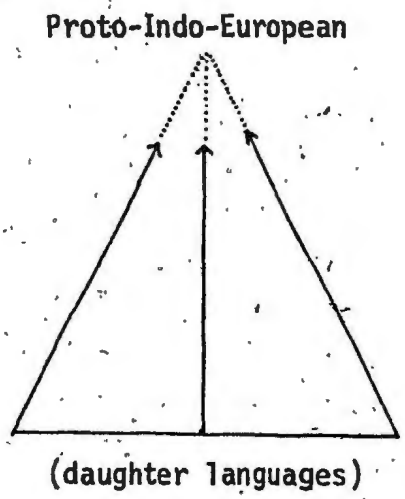
Perfect:

	singular	plural
1.	*woid-ǝo	
2.	*woid-tǝo	
3.	*woid-e	*wid-r-ó/ór/ur

The singular would be more complete than the plural.

Although found in some present and aorist tenses, reduplication has its true importance in the perfect which can exist with or without it. Its feature is the doubling of the initial syllable apparently for the purpose of suggesting continuity: PIE *sti-steA-ti, he is standing.

In conclusion, one must be reminded of the 'syntheticness' of our reconstructions of PIE. Our arguments and hypotheses can only be substantiated on the bases of evidence presented. Up until now Greek and Sanskrit have provided the best sources of evidence. In a diagrammatic form the presentation would look like an incompleted triangle. The dotted area represents the proto-structure.



The movement of reconstruction is based on converging evidence of the various daughter languages.

ABLAUT

Ablaut or vowel-gradation is "a variation of the vowel in length or in quality or in both, which originated in Primitive Indo-European, mainly as the result of the kind of accent or lack of accent borne by the syllable in which the vowel stands. The vowels of all syllables of the words were subjected to this alternation". (Kent 1932:70)

Accent can be divided according to intensity or intonation. If the former is predominant, it is called 'stress accent'; if the latter, 'pitch accent'. PIE was thought to have been characterized more by pitch, than by stress. This is based on Greek and Sanskrit. There is, however, no doubt that stress was also present.

The use of accent in PIE was considered to be 'free'. The variation of pitch or stress did not necessarily depend on the morphological character of a syllable: prefix, root, suffix, ending. Nor did it depend on its rhythmical position: first, penult. The following example, Greek anēr man can demonstrate three positions of the accent: (Prokosch 1939:118)

singular:	nom.	anḗr	(suffix)
	gen.	andrós	(ending)
	acc.	ándra	(root)

About the origin of ablaut, there are many and various theories. Kuryłowicz and Hjelmslev (following Hirt and Møller) thought that ablaut was caused by the changing accent. However, details of their explanations differ considerably. Benveniste, on the other hand, (following Meillet) says "mais le ton est lié à l'alternance, il ne la provoque pas". (Benveniste 1962:52)

Using Sanskrit as the basis of reconstruction, historically most early scholars patterned an ablaut system in PIE that had three primary vowels: *a, *i, and *u. But this theory was rejected by George Curtius,

when in his journal Berichte über die Verhandlungen der Kgl. Sachs. Ges. der Wissensch, in 1864, he proposed that an e appeared in paralleling positions in all of the European languages. On these grounds Curtius felt that the proto-language, PIE, should have an *e. "Nous croyons représenter exactement le système de M. Curtius par le tableau suivant:

Indo-europ.	a	ā
Europeen.	a, e	ā
Plus tard.	a, o, e	ā" (Saussure 1879:3)

This idea looked good and caught on rapidly.

Then K. Brugmann, using Curtius's theory, hypothesized: "...puisqu'il fait allusion (Studien IX 381) à la possibilité d'un plus grand nombre d'a primitifs:

Indo-europ.	a_1	(a)	a_2	ā
Européen	e		a	ā" (Saussure

1879:5) The symbol a_1 was supposed to represent the PIE vowel that gave rise to the European e; a_2 for that which had given rise to European a. As is demonstrated in the chart, Brugmann also allowed for further possible distinctions among the a's. This theory was immediately doubted and quickly abandoned.

Using the Greek vowels a, e, and o, W. Collitz proposed his theory. "...He showed that there was clear evidence in Indo-Iranian palatalization for a lost distinction between a when it corresponded to European e and a when it corresponded to European a or o." (Pulleyblank 1965;86-7) Collitz's theory was accepted as having offered the best evidence for the existence of the reconstructed *e. Up until then there

had been no real evidence for the a/o distinction in PIE. Now at least there was some support.

In an effort to find a more complete ablaut pattern, the Greek vowels were accepted as a model for PIE. Brugmann added the feature length as part of the make-up. He also included lengthened syllabic liquids and nasals, lengthened ī ū, and a vocalic phoneme which was called 'schwa - ə'. This new vocalic phoneme was important: it offered an explanation for the reduced grade of the lengthened vowels ā, ē, and ō. "In adopting this much more complicated, purely vocalic, solution, Brugmann and his followers renounced any attempt to find a single, all-embracing theory of ablaut." (Pulleyblank 1965:88)

Hirt offered his vocalic system: e o a, ē ō ā; the diphthongs ei oi ai, eu ou au, ēi ōi āi, ēu ōu āu; i u, ī ū which he derived from unaccented diphthongal or bisyllabic formations; the reduced vowels ə i ƀ, and the syllabic liquids and nasals r̥ l̥ m̥ n̥. (Hirt 1921:101)

In 1939 he changed his system and listed ə as the only weak vowel. He also added the following vowels: r̥̄ l̥̄ m̥̄ n̥̄, r̥r l̥l m̥m n̥n. (Hirt 1939:134) But prior to this says in his IG, "Es fehlen ganz die r̥̄, l̥̄, m̥̄, n̥̄, und es ist auch keine Möglichkeit vorhanden, sie irgendwie anzusetzen. Die Lautverbindungen r̥r, l̥l, m̥m, n̥n, die zu den merkwürdigsten indogermanischen Urformen geführt haben, sind hoffentlich ebenfalls beseitigt." (Hirt 1921: 102)

Burgmann's system differs from Hirt's not by including r̥̄ l̥̄ m̥̄ n̥̄, but by excluding i and ƀ. (Brugmann, Delbruck 1897:92-3) Brugmann also posits the diphthongs əi and əu, the palatal and velar nasals as vowels, and the aspirated and unaspirated forms of s and z.

Ferdinand de Saussure, in 1878, presented a structural analysis of ablaut. He paralleled the liquids and nasals: r̥ l̥ m̥ n̥/ r l m n; and the close vowels i and u. The latter were structurally in a different category and were to be regarded as vocalic forms of y and w. The ablaut series leipō, léloipa, élipon, was shown to be parallel to pénthos, péponṯha, épathon (where Greek a reflects an earlier syllable n̥). These phonemes which could appear either in consonantal or syllabic form were called "coefficients sonantiques". (Saussure 1879:8)

He also hypothesized two sonants A O which were very similar in their structural behaviour to y, w r, l, m, n. These were of undetermined phonetic character (Saussure 1879:135):

"Vocalisme des racines dans l'indo-européen.

Racine pleine	a_1	a_1i	a_1u	a_1n	a_1m	a_1r	a_1A	a_1O
	a_2	a_2i	a_2u	a_2n	a_2m	a_2r	a_2A	a_2O
Racine réduite	-	-i	-u	-n	-m	-r	-A	-O

When A or O was preceeded by a_1 or a_2 (Saussure uses Brugmann's two vowels a_1 and a_2) the combination lengthened the vowel. The sonant became syllabic if the vowel was dropped. This would appear in Greek as a and in Sanskrit as i.

This whole revolutionary proposal became the basis of the many different laryngeal theories that we have offered today.

Diachronically, ablaut is understood when it is stated in its morphological category. It may be defined "as a morphologically conditioned morpho-phonemic alternation". (Ghatage 1962:41) But it is undoubtedly far more than just an alternation. As stated, it maybe a reflex of two accent

types: a pitch accent, and a stress accent. Neither accent occurs on the same phonological level at the same time. Instead they seem to occur in a spiral of stages. (Prokosch 1939:120)

Pitch accent is understood to have developed during a period when e, if not fully accented was modified to o. Stress, on the other hand, is believed to have occurred under a twofold result: a weakening or loss of unstressed vowels; or conditionally, a lengthening of overstressed vowels. The former is referred to as qualitative ablaut; the latter, as quantitative ablaut.

Qualitative and quantitative ablaut are best explained in terms of three different types of vowel gradation. These types are established according to peculiarities of the roots in which the gradation occurs. The first type is one which we find in monosyllabic roots and is often explained as the result of the loss of accent. This monosyllabic root contains a short e vowel in the full grade: *sed-, to sit. The e vowel alternates with an o vowel. There is no evidence as to which occurred first, the e or the o. The two seem to alternate equally. The above root can assume five different forms. Antoine Meillet, who accepts Saussure's views on the vocalic system of PIE, offered these five forms: "Donc à côté du type général d'alternance vocalique:

I. *e(*ē) *o(*ō) zero..." (Meillet 1964:159)

The first is a full e-grade *sed-; the second is a lengthened ē-grade *sēd-; the third is a full o-grade *sod-; the fourth is a lengthened ō-grade *sōd-; the fifth is a zero grade *sd-.

Generally, e-grade is found in thematic verbs in the present tense. These verbs are categorized under 'Light Base': Gk., trépho, I feed; légo, I speak. The ē-grade with length is found in some aorist verbs which were mostly athematic verbs: L., venit/vēnit, he came.

The o-grade is found mainly in the perfect singular tense of the verb. It is also found in other areas: verbal and root nouns, and causative verbs. Examples for the o-grade are: Gk., trópē/tréphō, food; lógos/légō, speech. The lengthened o-grade is demonstrated in: Gk., rhōgmē, fracture/rhēgnūmi, I break.

The alternation of e/o which can appear in the root of the word equally is called qualitative ablaut.

Meillet: "...il y a trois autres types:

II.	*ē	*ō	*ə
III.	*ō	-	*ə
IV.	*ā	-	*ə

ou, du moins, deux si l'on admet que, dans le type III, le vocalisme *ē manque par hasard, comme il est probable." (Meillet 1964:159)

Because of the constant state of flux in which language usually exists; it is never very easy to present a system of language without many qualifications. Such is the case in discussing PIE ablaut. Here we have certain monosyllabic roots that show a long vowel in the full grade, *sēd-, to sit. The expected vowel is a short one according to Meillet's first chart. This lengthened grade could be due to an over or under-accented vowel. If it is a case of the over-accented vowels, then the root is lengthened. Otherwise it is weakened. When the root vowel is lengthened it does not necessarily follow the pattern of the full grade short vowel, and take the lengthened *ē.

Instead there is a triad division: *ē, *ā and in some roots the only attested vowel is *ō. When the root vowel is weakened then it takes the vocalic phoneme ə in the zero grade (see Meillet's second chart above).

Here we have examples of each of these sub-types: (Meillet 1964: 159-60)

II.	L.	sē-men seed	Go.	sai-so he has sown	L. sa-tus sown
III.	L.	dō-num gift			L. da-tus given
IV.	Gk.	phā-mí I say			Gk. pha-més we say

This classification is referred to as quantitative ablaut because it consists in the reduction or increase of vowel quantity.

Besides having a division into qualitative and quantitative ablaut, we also have one into derivational and inflectional ablaut. Derivational ablaut is when the ablaut occurs within a set of related words composed of the same base morpheme and all the affixes that can go with it. Inflectional ablaut is when it occurs in a base morpheme which adheres to the following suffix conditions: i) no change in the part of speech; ii) occurs in word-final position; iii) are not excluded by any stem endings; iv) are not replaceable by uninflected forms (except er/est, which can become more/most).

Although some languages demonstrate one better than the other (and Sanskrit shows them equally well), we offer the following examples as proof of our stated division:

Greek derivational:

*e	*o (intensive)	*ō (iterative)

verb:	phérō	phoréō	phōráō
	to carry	force to carry	to carry continuously
noun:	phértron	phorā	phōr
	cart	carrying	thief

Greek inflectional:

	singular	plural
nom.	patḗr, father	patér-es
gen.	patr-ós	patér-ōn
dat.	patr-í	patr-ási(n)
acc.	patér-a	patér-as

One could almost parallel the derivational formations in Germanic:

Germanic (modern English) derivational:

	*e	*o	zero
verb:	sit	?	ne-st
	*ē	*ō	*∂
noun:	set	soot	nest[1]

Paralleling forms for the Greek inflections are demonstrated in certain Old English nominal inflections. If we compare the inflectional endings of the u-stem nouns with those of its reconstructed forms in PGmc and PIE, then ablaut can be seen quite clearly:

	Old English		PGmc		PIE
masculine u-stems					
sg. nom.	sun-u	←	-uz	←	-u-s
acc.	sun-u	←	-um	←	-u-m
gen.	sun-a	←	-auz	←	-ou-os
dat.	sun-a	←	-au	←	-ou-ei

[1] One could consider ne-st - nest as analogical formations in MnE.

While ablaut is not readily observable in the Old English inflections, it still does exist. The nom. and acc. sg. show the zero-grade of ablaut in PGmc and PIE; while the gen. and dat. sg. show the full-grade in o. This contrast between the direct grammatical forms (nom. and acc.) and the indirect forms (gen. and dat.) is an instance of quantitative ablaut.

Eduard Prokosch in his book, A Comparative Germanic Grammar, presented a slightly different theory of ablaut from that of Meillet. Prokosch's hypothesis is based on a ternary division of the roots. He suggested making a distinction between the short vowel root, the long-vowel root, and the disyllabic root. The first Prokosch referred to as a 'Light Base', the second as a 'Heavy Base', and the third remained as stated. "A base may be a root syllable, a prefix, a suffix, an ending, or an independent particle." (Prokosch 1939:123)

In his discussion on 'Light Base' Prokosch indicated a difference between himself and Meillet, whom I have been following. Both accepted the qualitative ablaut, e/o with or without length. They differ on 'Light Base' quantitative ablaut in the zero grade. Meillet, who followed the structuralists, did not make this Hirtian-Prokosch distinction. Prokosch proposed a zero/reduced grade. The zero grade was the same as that proposed by Meillet, but the reduced grade proposed by Prokosch was called 'schwa secundum' and it was symbolized by ə.

This 'schwa secundum' allowed for a partial reduction of the full e-grade. "It can best be attested in Greek and Latin, where it appears as a (in Gk. only before nasals and liquids) in syllables that otherwise show alternation between e and o: pət- (reduced form of pet- in Gk. petánnūmi 'stretch', L. petō 'strive'): pateō 'stand open'; L. maneō 'remain' against

Gk. mḗnō; L. magnus 'great' against Gk. megas; the Gk. proposition pará 'about' by the side of perí 'around'."[2] (Prokosch 1939:95) This schwa replaced the zero grade in unpronounceable consonant clusters, and unacceptable grammatical forms.

It is also evident that Prokosch used this ə for another purpose. It adequately explained a distinction between the first three and the fourth and fifth classes of the Germanic strong verbs. A diphthongal glide in the first three classes assumed a vocalic function. These first three classes took a zero grade in the past participle: ei, eu/i, u - steigan, staig/stigum, stigans. The liquids l, r and the nasals m, n developed a supporting vowel, el, er, em, en in Germanic: OHG swimman, singan / swummum, sungun. The fourth and fifth classes which were monophthongal had a reduced grade: gi-noman, gi-sezzan / *nəmono-, *sədono-. It is in the understanding of these distinctions that we can see the justification for a 'schwa secundum' in Germanic.

So far no one has bettered Prokosch's hypothesis. It is true that there is not a ready acceptance of it. But this is probably due to the scope that 'schwa secundum' deals with. Other linguists would probably prefer to incorporate this small area into a more general theory. Prokosch happened to think, most likely on the bases of internal evidence, that it warranted a separate distinction, and hence a new symbol. We must be cautious in disagreeing with Prokosch here, after all the 'ablaut theory' is still an open question.

Not only are PIE diphthongs subjected to reduction, as we have shown, but they are also subjected to lengthening: *āi/*ōi. When these lengthened diphthongs were shortened, the length was taken from the first

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[2] The Greek words in this quote have been transliterated.

element: *ā*i ⟶ ai. The exception to this was to be found in the diphthong *ēi. Here PIE *ēi gave two forms in Germanic, ē and $ē^2$. The ē later became Germanic æ ; while the $ē^2$ became ia/ie in OHG. In Gothic *ē/*ēi appeared as lengthened ē. Prokosch pointed out that the evidence for this is very rare: *kēi- ⟶ Go., ON., OE., hēr and OHG., hiar, here.

For the most part the remainder of Prokosch's ablaut theory, as presented in his discussion on 'Heavy Base', is the same as that proposed by Meillet. However, Prokosch also includes a discussion on 'disyllabic bases' in his treatment of ablaut.

Yet even here in this discussion on disyllabic roots there is no complete agreement. Prokosch's theory is that to account for forms such as Gk., gónu : Go., kniu, knee one had to accept disyllabic roots. Theodoro Maurer proposed that disyllabic roots were merely a more irregular form of the monosyllabic base. The irregularity could be accounted for by the presence of a sonant: l, r, m, n, i, u, in the root. Prokosch's disyllabic base could undergo double gradation, that is, both syllables could be ablauted. Maurer felt that "the second syllable is entirely ignored". (Maurer 1947:9)

The disyllabic bases could be divided into: disyllabic light bases in ere/re/er/ēr/rē; and disyllabic heavy bases in erā (ā = ē = ō)/erə (~~ə~~ r ə, if both syllables were unaccented/rā). (Prokosch 1939:129) Maurer likewise offered a twofold division: roots where a short full vowel is found in the first or second syllable (except with a zero grade); and, roots where the full vowel of the first syllable is short (e or o) while the second syllable has ā or ē/ō. Examples for the first category can be seen in these variants of *ĝeneu- ⟶ *ĝenu, *ĝneu-, *ĝonu-, *ĝnow-, *ĝnu; for

the second category, *derā- —> *derə-, *drā-, *dorə-, *drō-, *drə-. Note that the vowel in the full grade occurs either before the sonant, or after it. There is never a full vowel in both positions. Finally, a vowel if it is contiguous to a sonant within the root may undergo metathesis. (Maurer 1947:18)

In conclusion, Maurer presents a table to demonstrate the three types of roots with their vowel gradations. I select from that table only those examples which I feel best demonstrate my own presentation. The Greek forms have been transliterated.

I. weak root vowel:

	MONOSYLLABIC		DISYLLABIC	
	short (zero-grade)	long (ə-grade)	1st syll. (no vowel)	2nd syll. ə (ə except before vowels)
Thematic pres. (suffix -ske/o)	PIE *g^{w}m-sḱeti Sk. gacchati he goes			*wenə- OHG. wunsken to wish
Thematic aorist.	PIE *leyk^{w}- Gk. élipe- he left	*kās- Sk. acīsat he commanded		*rewdə- Sk. árudat he wept
Verbal Adj. (suffix -tó- or -nó-)	PIE *g^{w}em- Gk. batós gone	*dō- Gk. dotós given		*pelə- Go. fulls full
Verbal Noun. (suffix -tey-)	PIE *g^{w}em- Go. (ga)qumþs	*dhē- Gk. thésis putting		*merə- Sk. mūr-tih firm body
Adjective. (suffix -u-)	PIE *ters- Go. þaursus dry			*plet(h)ə-, Gk. platus wide

II. e-grade root:

	(e vowel)	(ē/ā ~ ō)	1st syll. e	2nd syll. ə except before vowels
Thematic pres.	PIE *leyk^{w}- Gk. leipō I leave			*bhewə-? Sk. bhav-ati he becomes

III. o-grade root:

	(o vowel)	(ō vowel)	1st syll. o	2nd syll. ə except before vowels
Causative. (suffix -ey- e/o)	PIE *bher- Gk. phor-éō I carry			*gonə OE. cennan (see short vowel chart) to bring forth

IV. the root presents an alternation of a full vowel with a weak form (zero-grade).

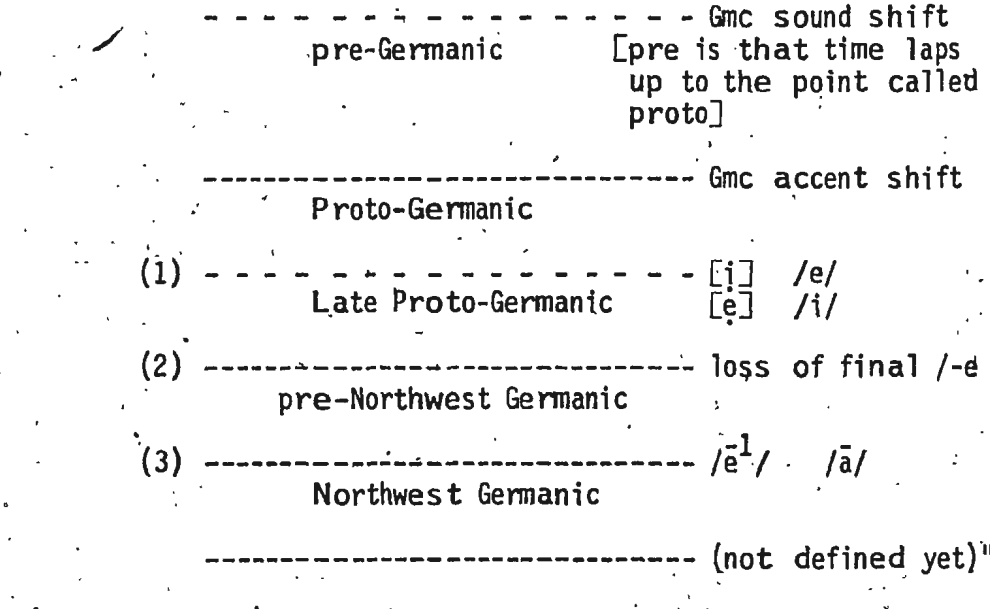
Perfect tense. (e/zero)	PIE *bheydh- Go. bái þ I waited	*rōg- Gk. ér-rōg-a I am broken	*rud- Sk. ru-rōd-a I wept

(Maurer 1947:3-6)

GERMANIC VOCALIC SYSTEM

The PIE vocalic system has undergone many changes in its evolvement to Proto-Germanic (hereafter PGmc). While some of the changes can be explained, others cannot and so remain only as conjectures. The reason for their 'unexplainableness' is the lack of any real comparative evidence. We have here two proto-languages which derive their strength from their daughter languages: PIE is reconstructed from Gk., Gmc., OIr., etc; and, PGmc from Go., OS., OE., etc. The relationship at this level is, at least, one step beyond any comparative evidence of the daughter languages. Hence we are left to make only semi-substantiated conjectures in our attempt to trace the relationship.

PGmc, as a point in time, is defined "as that stage of Germanic which was spoken between the time of the Germanic accent shift and the loss of /e a/ when final and weakly stressed". (Lehmann 1961:70) Structurally and in detail Elmer Antonsen extends this definition: "Proto-Germanic...



(Antonsen 1965:31) This definition is founded on purely structural data, and so is not completely stable. However it does serve to demonstrate generally where PGmc may be placed.

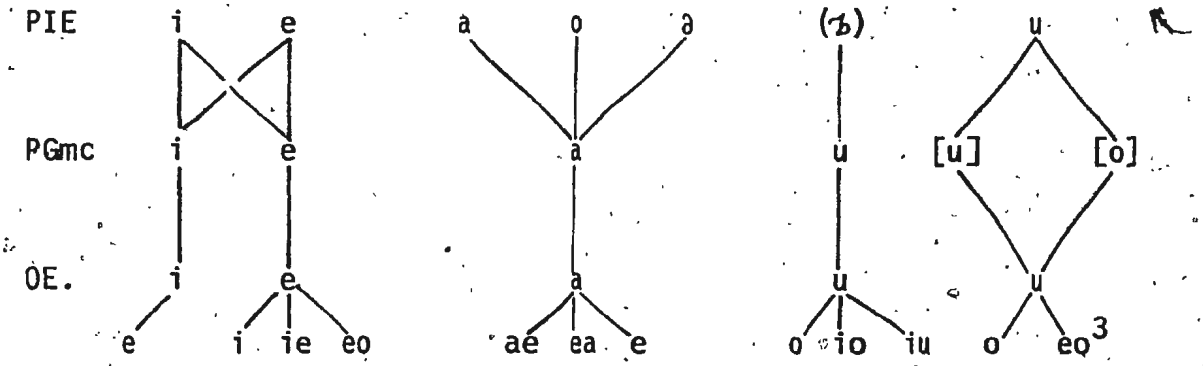
The division of the Germanic languages can sometimes be problematic. Pedersen feels that it is misleading to separate them into North, East, and West. (Pedersen 1962:31) He feels that certain linguistic facts agree too well between Gothic and Scandinavian. Hence he suggests a twofold division: East-North Germanic and West Germanic. This is not in agreement with the East and West division advocated by Scherer and other great German scholars.

North Germanic (Old Norse) is presently represented by West Scandinavian (Icelandic, Norwegian) and East Scandinavian (Danish, Swedish). The oldest records available are the Runic Inscriptions, some of which date to the 3rd and 4th centuries.

East Germanic (Gothic, Vandal, Burgundian) has only fragmentary records left. The most extensive of these are of Wulfilas' New Testament translations. These are Gothic translations of the late 4th century A.D..

West Germanic consisted of (English, Frisian, Low German, Low Franconian, High German). English has records dating back to the 7th century A.D.. It is divided into three periods: Old English (dialects-West Saxon, Kentish, Mercian, and Northumbrian) up to 1100 A.D.; Middle English up to 1500 A.D.; and Modern English from 1500 A.D. onwards. Frisian has records dating from the 14th century. Low German, with records dating from the 9th century A.D., is generally called Old Saxon up to 1200 A.D.; the modern dialect is called Plattdeutsch. Low Franconian gave us Dutch, Flemish, Brabantish, and Limburgish. High German has its oldest documents belonging to about the 8th century.

An over-all view of the short vowels as they existed in PIE, PGmc and Old English looks something like this:



PIE *i maybe considered as the zero-grade of the diphthong *ei: PIE *bheidh- ⟶ *bhidh- to bid. It remained i in Germanic language: Go., bidjan, ON., biþia, OE., biddan, OFris., bidda, OS., biddian, OHG., bitten to bid. *i behaves like any other PIE post vocalic sonant in that it becomes vocalic in the zero grade.

PIE *i ⟶ i NWGmc.: OHG., wizzum, OS., witun, OE., witan, and Go., witum we know. It does not remain i consistently in all Germanic dialects. In Gothic before h and r, it is presumed that *i ⟶ [e] written ai: Go., wair man. When PGmc *i/*a/*u occurred before a nasal (n) plus X(h), the vowel was nasalized and lengthened and the nasal was lost: PGmc *þiŋXanán ⟶ Go., þeihan, OS., thīhan, OHG., dīhan, to thrive; PGmc *þaŋXta ⟶ Go., þāhta, OS., thāhta, OHG., dāhta, OE., þōhte thought; PGmc *þuŋXta ⟶ Go., þūhta, OS., thūhta, OE., þūhte, OHG., dūhta seemed. (Wright 1952:28, Scargill 1951:16)

PIE *i ⟶ e before a-sounds, or originally when a, o or e occurred in the next syllable in PGmc: PIE *nizdos ⟶ OHG., and OE., nest nest;

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[3] conditional sound changes.

*wiros —> OHG., OS., OE., and OFris., wer man. Differences can occur, whether they be dialectical or not. In Old High German and Old English i may occur before the reflexes of a-sounds, instead of the expected e: 2nd per. sg. pres. subj. PGmc *wigaiz you kill vs *wegaiz you carry —> OE., wigan to fight vs wegan to carry and OHG., wigan to battle vs wegan to move. Apparently, there are other similar doublets: OHG., skif, skef ship; OE., spic, spec bacon. To explain these latter forms one has to assume that PGmc *i remained before i-sounds, but became e before a-sounds: PGmc:

sg.	nom.	*skepáz
	gen.	*skipeza/iza
	dat.	*skepōi
	loc.	*skipī (Marchand 1957:348f)

*i and *e were frequently confused, if not always. Prokosch and Meillet agreed that they were 'almost' members of the same phoneme, i.e., /e/ —> [i] and [e]. "In a limited way, a caused mutation of i to e, contrary to the direction of the drift. This seems to indicate that Gmc. i and e were practically one 'phoneme'; before i, both vowels appeared as i, before a, as e. Cf. 36. IE wiros 'man' > OHG wer; IE stighos > OHG steg; IE ni-zdom > OHG nest. But this change occurred only in comparatively isolated forms." (Prokosch 1939:109)

Kuryłowicz and Twaddell felt that *i and *e contracted through, at least, part of their distribution and therefore were phonemic: "the combined picture of /i/ and /e/ allophones looked like this:

before resonants alone	[e]
before nasal + consonant	[i]
before /r,l/ + consonant	[e]
before obstruent + /i,j/	[i]
before obstruent + /u,a/	[i] [e]

...we cannot say that /i/ and /e/ were allophones of the same phoneme because they both occurred, in contrast with each other, in certain phonetic circumstances. And yet the distribution of /i/ and /e/ was complementary in too many respects to justify treating them as two formal distinct phonemes." (Twaddell 1948:142 and 145)

Marchand stated that the reflexes of PIE *i and *e did not contrast in identical environments. He presented arguments to establish the validity of two assumed sound changes for preGmc: PIE *i ⟶ *e before a-sounds; *e ⟶ *i before u-sounds. To deny these changes will be to accept the allophones [i] and [e] as members of different phonemes. (Beeler 1966:473)

"Summing up, the assumption that *i and *e were members of the same phoneme in Proto-Germanic permits the explanation of the forms in the individual languages; it is defensible on methological grounds; it permits the explanation of anomalies in the daughter languages; it offers a neater picture of Proto-Germanic; it yields a better explanation for the situation in Gothic in its relationship to the other Germanic languages. It is therefore to be preferred to the assumption of a phonemic distinction between the two sounds." (Marchand 1957:354)

PIE *e ⟶ i in Germanic unless followed by a mid or low vowel, such as e, o, or a. Leveling has to an extent obscured the original conditions. PIE *bher- ⟶ Go., bairan, ON., bera, OE., beran to bear; PIE *ed- ⟶ Go., itan, ON., eta, OE., etan, OHG., ëzzan to eat; PIE *nem- ⟶ Go., niman, ON., nema, OE., niman to take.

PIE *e ⟶ i: a) before a nasal plus a consonant: Go., OE., bindan, OHG., bintan to bind; b) before a cluster of consonants plus i

(if more than one consonant plus j occurred before i, ī or iu in the second syllable, then it was realized as a combination according to the rule of alternation i/j dependent upon the length of the preceding syllable: Go., hairdeis); c) in unaccented syllables, except in the combination -er when not followed by an i in the next syllable: PGmc fōtiz —> OE., fēt. The exception -er is to be found in OE., fæder, OS., fader, OHG., fater father. (Wright 1952:28)

PIE *e —> i/*a —> e when followed by an i, ī or j in the same or the next syllable: PIE *treises —> PGmc þriies, OHG., dri, OE., þri, Go., þreis three; PGmc *gastiz —> ON., gestr, Go., nasjan, OE., nerian to save; PIE *sed- —> Go., satjan, OE., settan to set.

PIE *e broke into ea/ia before a in the following syllable: PGmc *ebnaz —> Go., ibns, OHG., eban, OIcel., iafn, OSw., iamm even. It broke into eo/io before u in the following syllable in some languages: PGmc *meluk —> OE., meol(o)c, OIcel., OSw., miolk, otherwise it was i as in Go., miluks, OHG., miluh, MnE., milk.

In West Germanic when e is umlauted by a following i/j the consonant which preceded was doubled: PGmc *settian —> WGmc., sittian, OE., sittan to sit. This particular change is carried out with almost complete regularity in all the Germanic languages. (Campbell 1959:42)

Old English e —> eo before h and r followed by any consonant, and before l if it was velarized by a following c or h. It is very doubtful that u in the following syllable caused e to become i. Phonetically the u just did not exert sufficient influence to parallel the case of a in the following syllable.

Final unstressed PIE *e —> PGmc *i. It would persist after short syllables, as the reflex of PIE *i did in OE., OS., and OHG.: eOE.,

meri ⟶ 7OE., mere sea. Also medial -e- did not change before a final unstressed -e, as it should have if final -e ⟶ -i: OE., mec me.

According to Beneditksson, final -e remained unchanged and in contrast with final -i throughout the PGmc period. PIE *e ⟶ i before u under the following circumstances (Beneditksson 1966:181f):

i) before second syllables with i, ī or iu
ii) before consonant clusters plus j
iii) before nasal plus consonant
iv) before second syllables with a, o, or au.

There is much dispute about this change of *e ⟶ i before u. Some clear examples of its non-occurrence are available, especially in u-stem nouns. Other examples show that it maybe absent throughout the entire Germanic area: ON., meðu ⟶ miǫðr, OHG., metu, OE., medu mead(drink). Then there are cases where the change is present in only a part of the area: ON., felu ⟶ fiǫl, OE., feolu; but also OS., filu many/much. Sometimes the change is present for all, or at least most of the Germanic areas: PGmc *sibun, OHG., sibun, OS., sibun, OE., siofon (earlier sifun).

The conclusion must be that the phonemic status of the PGmc opposition i:e is more difficult to establish before a following syllable with u, than in other positions. Yet there can be little doubt that the change of e ⟶ i before u, did not occur.

PIE *a, although somewhat uncommon, remained in all Germanic languages: PIE *ad- ⟶ Go., ON., OS., at, OE., æt, OHG., az to; PIE *agros- ⟶ Go., akrs, OS., akkar, ON., akr, OE., æcer, OHG., acker ploughed land. PrimGmc *a ⟶ æ in Old English and Old Frisian when not followed by a nasal consonant.

PIE *o —> a initially and in stem syllables: PIE *oktō(u) —> Go., ahtau, ON., ātta, OFris., achto, OS., OHG., ahto, OE., eahta eight; PIE *ghorto- —> ON., garðr, OE., geard, OHG., gart yard.

PIE *u maybe considered as the zero grade of the diphthong eu/ou. This vowel remained in PGmc before i and u: PIE *bhudh- —> Go., budum, ON., buðom, OE., budon, OS., budun, OHG., butun we offered. Meillet considered *u as a sonant vowel. (Meillet 1970:30)

PIE *u —> o is a conditioned sound change. The change is prevented by an incompatible vowel in the following syllable, but sometimes favored by a compatible vowel. This PIE *u remains before *i or *u in the following syllable; but changes when followed originally by a mid or low vowel, and when not protected by a nasal plus a consonant, or an intervening i or j: PIE *ghutom —> OE., god, OHG., got god. Although this sound change occurs with considerable regularity in Old English, there are still many exceptions. Often Old English will show u where other West Germanic languages will show o: OE., full, OHG., foll full; OE., fugol, OHG fogal bird.

By PGmc times *u was developing allophones under paralleling circumstances to that of *i. "...It has been maintained that [i] and [e] became members of one and the same phoneme, and that their relationship was parallel to that between [u] and [o]." (Beneditksson 1966:180) Both of the allophones had a clearly marked allophonic structure, according to Twaddell. When the syllable was stressed, the allophone was determined by the following consonant. The conditions of this development are as such: a) before a nasal plus a consonant (an [o] allophone occurred); b) before a syllable with high vowels (here an [u] allophone was developed); c) before

a low vowel in the following syllable (here an [o] allophone was developed, and it remained an allophone of the /u/ phoneme). When the allophone appeared in an unstressed syllable, the higher allophone occurred. "The determinants [of the allophones [o] and [u]] were these:

in monosyllables	[u]	
before high vowels	[u]	
before low vowels		[o]
(except) before a nasal plus consonant	[u]	

Examples: Gmc *furi: OHG furi 'before'; Gmc *fura: OHG fora 'before'; ...*sunus: OE sunu 'son'." (Twaddell 1948:144)

There seems to be many more examples of *u —> [o], than of *i —> [e]. But nowhere is this change universal, especially in Germanic. Here there is clear fluctuation from one to the other: OHG., fol, OE., full full; OHG., wolf, OE., wulf, ON., ulfr wolf; and doublets: OHG., furhten: forhten to fear, OE., spura spur : spora track.

"In view of the extensive parallelism between i:e and u:o, the fact that the observable alternation of u:o must in part be related to the morphological environment is of course a strong argument in favor of explaining the distribution of i:e in the same way. Therefore, even though i has remained more frequently than u, and though no traces are preserved of the intermediate stage of the alternation i:e as of u:o, analogy is the most likely explanation for i:e, too." (Beneditksson 1966:185)

PIE *ə —> a in Germanic. In the ablaut system it is the reduction of the long vowels ē, ō and ā: PIE *pətḗr —> Go., fader, ON., faþer, OE., fæder, OS., fadar, OHG., fater father; PIE *lət- —> Go., lats, ON., latr, OE., læt, OS., lat, OHG laz lazy. Initially, *ə is confused with the short a in Germanic. Ordinarily it disappears, or if it is represented

by some vowel in cases difficult to determine, it is one of the vowels a, i or u. (Meillet 1970:30)

PIE *ə (schwa secundum) is a partial reduction of *e. The full reduction would be zero. (Prokosch 1939:95) In Germanic, *ə → u in unstressed or weakly stressed syllables before and after nasals and liquids: PIE *ĝhəmon → Go., OE., guma, ON., gume, OFris., OS., OHG gomo man; PIE *təl- → Go., þulan, ON., þola, OE., þolian, OFris., tholia, OS., tholian, OHG., dolēn suffer. (Prokosch 1939:102)

The PIE syllabic resonants developed into Germanic as:

PIE		PGmc	
r̥	→	ur/ru/or[1]	
r̄	→	ur/ru	/-C, V[2]
l̥	→	ul/lu/ol[1]	
l̄	→	ul/lu	/-C, V[2]
m̥	→	um/om[1]	
m̄	→	um/om[1]	/-C, V--#[2]
n̥	→	un/on[1]	
n̄	→	un/on[1]	/-C, V--#[2]

1. phonologically conditioned variant, (a-umlaut).
2. environmentally conditioned.

PIE had four resonants, l m n r, with syllabic and non-syllabic allophones in complementary distribution. Based on evidence from Sanskrit and other daughter languages, length was attributed to the four allophones that were syllabic. This brought the number of syllabic allophones to eight, four short and four long. If the resonants occurred between consonants (with a pause, or initially, or finally counting as a consonant) they were

syllabic, [l̥ m̥ n̥ r̥]. /If the resonants occurred before or after vowels, they were non-syllabic, [l m n r]. The original source of these PIE short vocalized consonants was due to the loss of the vowel a, e or o in the short diphthongs, and in combinations of short vowels plus l m n r. The result was that el em en er ⟶ [l̥ m̥ n̥ r̥]. This loss appears to have been due to a shift of accent to some other syllable in the word. During the pre-Germanic period the allophones [l̥ m̥ n̥ r̥] came to coincide with ul um un ur. (Moulton 1948:81)

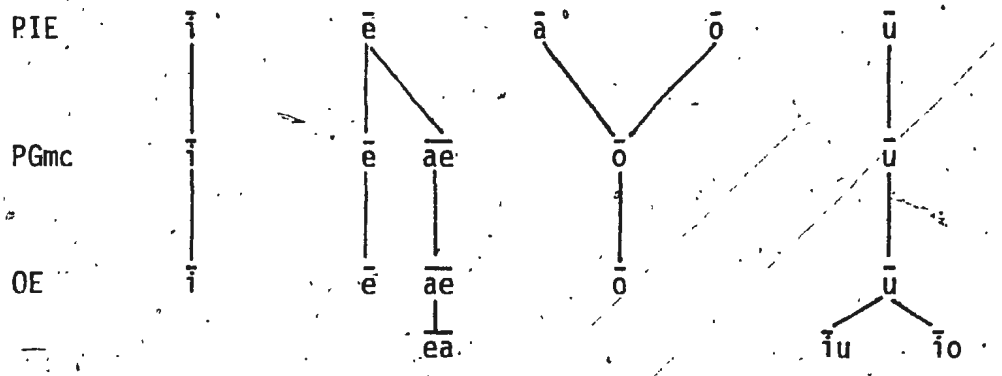
PIE *l as in *wlk^{w}ós ⟶ PGmc *wulfaz, OE., wulf, OHG wolf, Go., wulfs wolf; PIE *plnós ⟶ Go., fulls, OE., OS., full, OHG., vol full.

PIE *m as in *g^{w}m- ⟶ Go., ga-qum-þs arrive, go; PIE *ḱmtóm ⟶ OE., hund, OHG., hunt, OS., Go., hund hundred.

PIE *n as in *mn-tós ⟶ Go. ga-munds, OE., mynd(e), OHG., gi-munt remembrance; PIE *wndh- ⟶ OE., wundor, OS., wundar, OHG., wuntar wonder.

PIE *r as in *mr-ti ⟶ Go., maurþr, OHG., mord death; PIE *prkā ⟶ OE., furh, OHG., furuh furrow.

Here are the reflexes of the PIE long vowels as they existed in PGmc and Old English:



PIE *ī remained in NWGmc, but developed into a diphthong ei in Gothic. PIE *su-īno —> Go., swein, ON., suīn, OE., OS., OHG., swīn swine; PIE *mei- —> GO., meins, ON., mīnn, OE., OS., OHG., mīn my.

*ī was rare. It was believed to have been a contraction of a weak diphthong which arose from the weakening of an original strong form eiə, āi, ēi, ōi through the loss of accent. The e in eiə had disappeared before the contraction took place. (Wright 1952:23)

PIE *ū remained in Germanic. PIE *sūro- —> ON., sūrr, OE., OS., OHG., sūr sour; PIE *pū- —> Go., fuls, ON., fūll, OE., OS., OHG., fūl rotten.

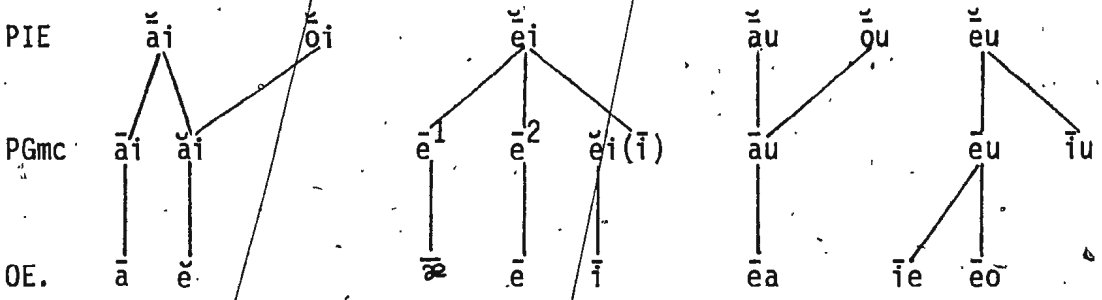
*ū was also very rare. Like PIE *ī it was believed to have been a contraction of a diphthong which arose from the weakening of an original strong form euə, āu, ēu, ōu through the loss of accent. (Wright 1952:23)

PIE *ē remained, but it is generally written ǣ. In Gothic ǣ reverts to ē; and in the North and West Germanic languages it results in ā. This ā develops secondarily into ǣ in Old English and into ē in Old Frisian: PIE *dhē- —> Go., ga-dēþs, OE., dǣd, OHG., tāt, OFris., dēd deed; PIE *sē- —> Go., mana-sēþs mankind, ON., sāð, OE., sǣd, OFris., sēd, OS., sāð, OHG., sāt seed; PIE *ēd- —> Go., ētum, OE., ǣton, OFris., ētom, OS., ātun, OHG., āzum we ate. This change is due mainly to the assumption of a transitional stage between ē and ā.

PIE *ā —> ō in Germanic. *ā was a rare vowel and does not show ablaut relations, except with its weakened grade: PIE *māter —> Go., mōdar, ON., mōþer, OE., mōdor, OFris., mōder, OS., mōdar, OHG., muoter mother; PIE *bhrāter —> Go., brōþar, ON., brōþer, OE., brōþor, OFris., brōther, OS., brōthar, OHG., bruoder brother; PIE *stā- —> Go., ON., stōþ, OE., OFris., OS., stōd, OHG., stuo(n)t stood.

PIE *ō remained in Germanic languages. It represents a more closed vowel than the one which represents the corresponding short vowels. *ō may be considered as a contraction of the diphthong oə, the same as *ā is believed to have contracted from aə. (Campbell 1959:40) PIE *bhlō- ⟶ Go., blōma, ON., blōme, OE., blōma, OS., blōmo, OHG., bluomo bloom; PIE *dhōm- ⟶ Go., dōms, ON., domr, OE., OS., dōm, OHG., tuom sentence: setting down; PIE *plō ⟶ Go., flōdus, ON., flōþ, OE., OS., flōd, OHG., flout flood.

The PIE diphthongs as they appear in PGmc and OE. are:



Diphthongs in PIE appear to simplify in their development to the various daughter languages. The exception is to be found in the Germanic languages where this feature is rather resistant and tends towards greater complexity. This is even more so in Old English with the feature of breaking, a ⟶ æ ⟶ ea etc. Only the diphthong *ei in PGmc became truly simplified; others such as *ai and *au retain their diphthong status. Simplification has occurred in a general way only in particular languages.

PIE *ēi ⟶ ī in Germanic, probably through the different stages of *ēi ⟶ *ii ⟶ *ī. This change probably was not complete by PGmc, or otherwise Gothic would show it. Instead Gothic shows the ei: PIE *steigh- ⟶ Go., steigan, OE., OS., OHG., stīgan to ascend.

PIE *āi ⟶ PGmc āi, Go., āi, OE., ā, OS., ē, and OHG., ei. But it became long closed ē before r, old h, w, or when final. The contraction to a monophthong had already taken place in early Old English. At this period it must have been an open æ sound, otherwise it would have fallen together with Germanic ē. PIE *mē-ies ⟶ OHG., mēro, OS., mēra, OE., māra, Go., maiza greater; OHG., lēren, OS., lērian, Go., laisjan to teach; OHG., OS., lēh, OE. lāh, Go., laihr I lent; OHG., sēla, OS., seola, OE., sāwol, Go., saiwala soul. (Wright 1952:36)

PIE *ōi ⟶ PGmc ai: PIE *woid- ⟶ Go., wáit, OE., wāt, OS., wēt, OHG weiz he knows; PIE *oin- ⟶ Go., áins, OE., ān, OS., ēn, OHG., ein one.

PIE *ēu ⟶ PGmc ēu, Go., iu, OS., eo(io), OE., ēo, OHG., eo ⟶ io ⟶ ie. When followed by an i, j or u in the next syllable then *eu ⟶ iu. PIE *newo- ⟶ *neujo ⟶ *niuja, OHG., OS., niuwi, OE., niewe, Go., niujis new; PIE *leuk- ⟶ PGmc *leuhtjan, OHG., liuhten, OS., liuhtian, Go., liuhtjan to light.

PIE *āu ⟶ PGmc *au, OS., ō, OE., ēa, Go., áu, OHG ou, but long close ō through stages ao, ǫ before the consonants d, t, z, s, n, r, l, and h. OHG., tōd, OS., dōd, OE., dēað, Go., dauþus death, from PIE *dhwen - darkness.

PIE *ōu ⟶ au: PIE *rōudh-os, Go., ráuþs, OE., rēad, OS., rōd, OHG., rōt red; Go., bauþ, OE., bēad, OS., bōd, OHG., bōt has offered; PIE stōur-os ⟶ ON., staurr, OE., steorra star.

Lengthened diphthongs, with the exception of the diphthong ēi, cannot be easily recognized as such from Germanic evidence. This is because

they either shortened their first element, or more rarely, lost the second element. PIE *ēi is an example of where the second element of the diphthong was lost.

PIE *ēi → PGmc*ē. This PGmc vowel is not to be confused with PGmc *ē (ǣ) which is derived from PIE *ē. The former PGmc *ē represents an open vowel and is written *$ē^2$; the latter PGmc *ē represents a closed vowel and is written *$ē^1$. PGmc *$ē^2$ remained in the daughter languages, except in Old High German where it developed into the diphthongs ea, ia, or ie. PGmc *$ē^1$ was either in the process, or had become ǣ in some stage of early Germanic (see sound change PIE *ē → PGmc ǣ): OIcel., sāð, OE., sǣd, OS., sād, OHG., sāt seed.

Cognates for the Germanic words with $ē^2$ have been found in the PIE family of languages. For some of these cognates, acceptable PIE reconstructions have been established. But there has been no consistent pattern of origin established, and the examples are few: PIE *kēi → Go., ON., OE., hēr, OHG., hair; PIE *stēigh- → Go., steigan, OHG., stiaga; PIE *skēi-ro shine → OHG., skiari clever, normal grade in Go., skeirs, ON., skīrr, OE., scīr, OS., skīr clever. (Prokosch 1939:104)

The real problem is not to explain the origin of PGmc *$ē^2$, but to explain how these different combinations developed into a single phoneme.

Max H. Jellinek attempted an explanation of PIE *ēi into PGmc *$ē^1$ and *$ē^2$ which proved to be very inadequate. (Lehmann 1955: 66f) He based his argument on a pattern that he established in a small group of words. These were nouns and adjectives in which PGmc *$ē^2$ occurred: e.g. OHG., fiara side. From this group he excluded those nouns with cognates showing [iz]: OE., med, OHG., miata with cognates Av., mizdam, Gk., misthos.

Jellinek also eliminated the preterites of class seven strong verbs which have *$\bar{e}^2$: OHG., heizan call, haltan hold. Even if Jellinek's suggestion had value, it was too narrow in scope to be applied to the problem as a whole.

Another objection to Jellinek's proposal was in his failure to identify the origin of the PGmc *$\bar{e}^2$. It was not until after he had forwarded his suggestions that ablaut relationships were discovered and formulated for PIE. "Thus he failed to specify whether all PIE $\bar{e}i$, or only original $\bar{e}i$, /eXy/, as opposed to lengthened grade $\bar{e}i$, became $\bar{e}^2$." (Lehmann 1955:67)

GERMANIC

i) ablaut system

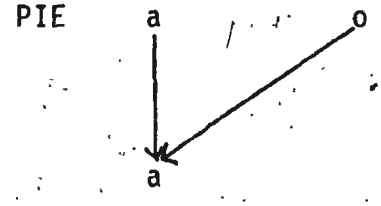
Although different in form, ablaut, in concept, has been very well preserved in Germanic. In fact it has been stated that "...partial maintenance of vocalic alternations is an archaism in Germanic." (Meillet 1970:60)

The intervention of the sonant vowels i and u, and their alternation with i/e and u/o have extended the ablaut system from the three vowel qualities *a, *e and *o in PIE. These alternations were added to those which were inherited from PIE. They were created in Germanic and appear frequently in West Germanic. "However, as a result of the changes in the vowels and the sonants, Germanic offers several more or less parallel and distinct types of alternation, whereas Indo-European had only one type." (Meillet 1970:60) This brought new complications to the system.

Remnants of the PIE ablaut system clearly persisted in the root syllables of the Germanic languages. In some cases it can be seen in the inflectional endings of nouns (see chapter 2). But these remnants do not demonstrate the same unity that ablaut did in PIE. It was the addition of the vowels i/u and the vocalic resonants which gave this new scope. They allowed for greater alternations within the system.

Ablaut was maintained in Germanic when its environment was fully consonantal; or when it occurred before a true consonant. Thus Germanic could have: e/i ~ ē ~ a/ō (zero): (a complete set of examples for Germanic ablaut will be presented later in this chapter). The zero-grade of the ablaut is a rarity in Germanic. The reason for this is because it involves an accumulation of consonants.

In Germanic the alternation of ō/a took place where the present tense showed the root vowel a, that is, the derived vowel of PIE *o or *a. In a diagram:



Only by exception is the Germanic alternation ō/a based on the PIE vowels ā/ō. In a diagram:

An example for this can be seen in the Old English class six verb: infinitive faran to set forth; preterite singular, fōr. (Meillet 1970:56f)

There are other important changes that occur in West Germanic and have come down to us from PIE. These changes have occurred under the following conditions:

i) When ablaut occurred before an original PIE s in the neuter suffix -os/-es, the suffix became Germanic -az/-iz: *sigiz⟶ Gmc., sigi, later Go., sige victory; and *bariz⟶ WGmc., beri, later Go., bere barley. This PIE s is represented in Old English by r: PIE *mē-īes⟶ OE., māra greater; PIE *geus⟶ OE., inf. cēosan, and past participle coren to choose (Verner's Law). "...r from z is restricted to the medial position, for initial z did not exist in Germanic, and originally final z is always lost in OE., whether belonging to inflectional or derivational forms." (Sievers 1970:125) There are very few examples to demonstrate this change.

Most of the words, which originally belonged here, have allied themselves with other declensions or genders.

Where an r does appear in Old English in the position of an originally final z, it is the result of a reinsertion from polysyllabic forms. For certain forms like sigor or lombor, there are comparable forms like sige and lomb. The former, sigor, retains under all circumstances the suffixal s as r, and have become part of the o-declension. Sometimes there occurs a dative singular without an ending: sigor. The latter, lombor, has dropped the r in the singular, but retained it in the plural.

ii) When ablaut took place before n in the suffix -ono/-eno of the past participle of strong verbs, it became Germanic -ana/-ina. There are a few umlauted forms to demonstrate this change: ǽgen and cymen. "The past participle of strong verbs has throughout OE. the ending -en: (ge)-bunden, etc., but the dialects also occasionally have -an, -on, -un." (Seivers 1970:269) It is worth noting that this gradation was particularly noticeable in the weak declension suffixes -en/-on/-n, which became Germanic -in/-an/-um. They have for all practical purposes completely disappeared in Old English.

iii) When ablaut occurred before l in the suffix -olo/-elo, it became -ala/-ila in Germanic, and -ol in Old English. Both stages can be clearly seen in the double forms: *daugola/*daugila —> OE., deagol/diegol secret.

iv) Ablaut is reflected in Old English when it originally occurred before r. This can be seen, especially, in the suffixes of nouns which show relationship: OE., fæder father; broþor brother; swuster sister.

Apart from these PIE derivatives demonstrating traces of ablaut in Old English, there are further extensions. These, however, depend upon secondary stress, and also partially upon the vowels of adjacent syllables. More specifically, there is an influence in effect to change o and u in final positions to e. This would occur only when the word is lengthened by a syllable with secondary stress, and having a, o or u. An example to show this can be seen in Old English: staðol foundation; the gen. sg., staðoles; the dat. sg., staðole; while the plural form is staðelas, -u, -um; and there is also the verb staðelian. (Seivers 1970:86f, 125, 212f)

In the development of ablaut from PIE into Germanic, there can be no doubt that a certain amount of secondary inovation took place. This alone can account for the lack of complete cohesiveness among the Germanic strong verbs. While it is advantageous to propose a threefold division giving forth a multiplicity of patterns, it is not so very easily demonstrated. Meillet suggests a system of four ablaut patterns; Prokosch says that four patterns are too many, but three are not enough.

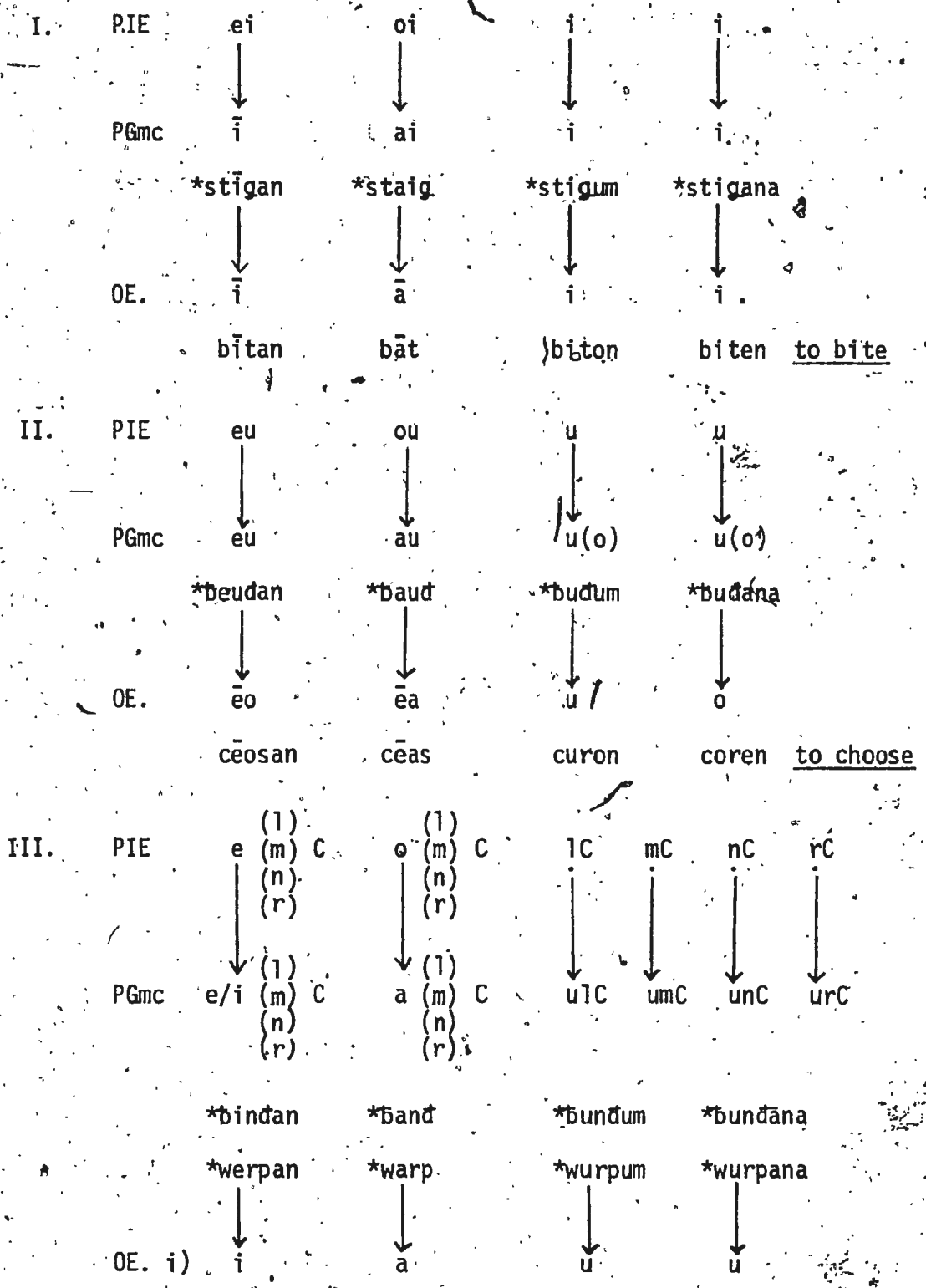
It is our intention to collapse Meillet's four ablaut patterns into a system of three, by fusing patterns III and IV. Thus we gain the simplicity of a three-pattern system, but retain any advantages of a four-pattern system.

Meillet's four sequences of ablaut-patterns for PIE (as seen in Chapter 2) are:

I.	*e	*o	zero
II.	*ē	*ō	*ə
III.	*ā/*ō	-	*ə

(The reason for fusion pattern III and IV is that PIE *ə and *ō → PGmc ō.)

I. PIE ablaut pattern e/o/zero:



(Verbs with a nasal plus a consonant have this pattern:

bindan band bundon bunden to bind)

ii) e ea u o, verbs

(Verbs with l plus a consonant have this pattern:

helpan healp hulpon holpen to help)

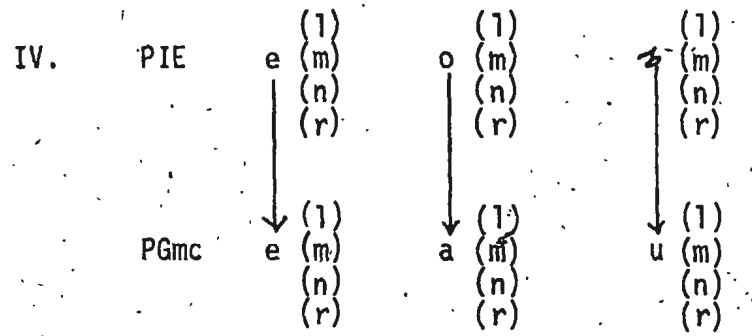
iii) eo ea u o

(Verbs with r or h plus a consonant have this pattern:

weorpan wearp wurdon worden to become)

To this class belong those verbs in which the liquids preceed the vowel, and are followed by two consonants: OS., bregdan, OHG., brettan to braid. The preterite plural, however, if formed with ru and lu instead of with ur and ul is: OS., brugdun, OHG., bruttum. Frequently metathesis is found to occur in this particular class.

II. PIE ablaut pattern ē/ō/∅



i) *beran *bar *bērum *burana

ii) *niman *nōm *nōmum *numana

(Note that the preterite plural vowel has the lengthened grade.)

i) beran bær bæron boren to bear

ii) niman nōm nōmon numen to take

(Note that the preterite plural in Old English is based on the lengthened grade in PGmc.)

V. PIE eC oC

PGmc eC aC ēC e

*metan *mat *mētum *metana

The C in this group would not, of course, be either a liquid or a nasal. The preterite has the lengthened grade *mētum we measured. It might be that e is due to the weakness of the root syllable immediately preceding the strongly stressed ending: PIE *sé-sed-mē ⟶ sé-zd-mē ⟶ seədme ⟶ sēdme. The past participle had the same vowel as the present. Normally it would have developed into an a, agreeing with the preterite singular and creating an anomally in the ablaut system.

OE. e æ ǣ e

metan mæt mǣton meten to measure

III. PIE ablaut pattern ā/ō/ə:

VI. PIE a ā

PGmc a ō ō a

*graban *grōb *grōbum *grabana

The preterite plural should demonstrate a vanishing grade, however by analogy with e/ē, the plural was formed in ō. The past participle being end-stressed has the short vowel a.

OE.	a	ō	ō	a/æ	
	faran	fōr	fōron	færen/faren	to go

On the basis of the preterite singular and plural, class VII strong verbs may be classified under Meillet's second pattern: PIE ē/ō/a.

VII.	PIE	ē	ō		
	PGmc	ē	ō		
	OE. i) ā	ē	ē	a	
	hātan	hēt	hēton	haten	to command
	ii) ēa	ēo	ēo	ēa	
	bēatan	bēot	bēoton	bēaten	to beat
	iii) ēa	ēo	ēo	ea	
	fēallan	fēoll	fēollon	feallen	to fall
	iv) a/ō	ēo/ē	ēo/ē	a	
	gangan	gēong	gēongon	gangan	to go
	fōn	fēng	fēngon	fangen	to take
	v) ǣ/ā	ē/ēo	ē/ēo	ǣ/ā	
	lǣtan	lēt	lēton	lǣten	to let
	cnāwan	cnēow	cnēowon	cnāwen	to know
	vi) ō/ē	ēo	ēo	ō	
	blōtan	blēot	blēoton	blōten	to sacrifice
	wēpan	wēop	wēopon	wōpen	to weep

Since Class VII is not a settled category (nor are Classes IV - VI, all that definite) there may be other verbs which belong here. But this need not prevent us from making certain observations: i) to this Class belong those verbs which originally had reduplication in their preterites; ii) also, it appears as if this Class has been established on the basis of ēo or ē vowels in the preterites. Such observations are not new; but nevertheless, they should be reaffirmed. (Priebsch and Collinson 1966:174f; Wright 1952:87ff; Campbell 1962:317ff)

It appears doubtful whether the relationship of the PIE ablaut patterns to those of the Germanic seven patterns will ever be fully explained. Whether this is because of secondary innovation, or due to the rigor of the Germanic classifications cannot now be said. But newer insight might be gained, if we were not to adher to the rigor of the Germanic classifications; at least, not when trying to establish the relationship with PIE. After all, this characteristic is clearly Germanic, not PIE.

ii) characteristics of the Germanic verb

The general structure of the Germanic verbal system had changed considerably from that of PIE. Even the number of forms had been substantially reduced, making the verbal system much more rigorously defined and simple.

For the most part the verbs were divided into two groupings: strong verbs and weak verbs. The strong group form their preterites and past participles by means of ablaut, or vowel alternation: OE., bītan to bite, bāt bit, bitēn bitten; or by reduplication of the radical syllable, which however, does not exclude ablaut: OE., gān to go, gangan gone. The weak group formed their past tense by the addition of a syllable containing a dental, -de or -te; and their past participles by means of a dental suffix, -d or -t: OE., fremman to perform, fremede he performed, fremedon they performed, gefremed performed. Besides these groupings there are a few other verbs which form minor classes: Preterite-present verbs: OE., witan to know; and verbs in -mi: OE., eom, bēom to be.

The verbs which belong to the strong group were originally divided into non-reduplicated and reduplicated verbs. The non-reduplicated verbs are divided into six classes on the basis of ablaut patterns. The originally reduplicated verbs which can be seen very clearly in Gothic: Go., haldan to hold, preterite haihald held are all unusually classified in Old English as Class VII verbs.

Germanic had two tenses: a non-past, and a past (see chapter 1, Tenses). It did not retain forms for the PIE distinction between an action being continued in the past, and an action being developed in the present: Gk., eleipon I was leaving, leipō I am leaving. The functional distinction

between aorist and perfect disappeared. They were fused into a combination tense called the 'preterite'. Because of this fusion, the forms of the preterite were taken partly from those of the aorist, and partly from those of the perfect. Germanic never produced a distinctive inflection for giving expression to the future. The expression of time has always remained limited to the opposition of non-past (the forms of which also serve for the future) and the past. This is still true of the modern dialects, all of which make use of non-past auxiliaries to express the future.

Thus Germanic, for all useful purposes, has eliminated the imperfect, the aorist, and the pluperfect, and never developed a distinctive future tense. Remnants of the old morphologies are to be found throughout the various Germanic languages: the aorist for example is thought to survive in the WGmc. 2nd person singular of the past tense of the strong verbs in -i ← -iz ← -es: OHG., stigi (stiegst). (Priebsch-Collinson 1966:98)

All the Germanic languages have 'Preterite-present' verbs. These are strong verbs in which the preterite forms have taken on a present meaning: OE., wāt I know represents an old perfect form of the verb, meaning I have discovered, observed. This change is likely to have occurred in pre-Germanic, since this verb is cognate with Greek oĩda I know, likewise an archaic perfect. These verbs are distributed among the various ablaut classes: class VI OE., mōt I may/ mōton they may.

Only the active voice has survived in Germanic. The PIE medio-passive voice was eliminated except for archaic remnants. In Old English there is a clear example of the original medio-passive voice: OE., hātte is/was called, the plural is hātton are/were called. With the loss of this feature of the language, the passive voice is formed, for example, in Old

English with the use of an auxiliary: bēon, wesan to be, occasionally also with weorþan to become. Coupled with this auxiliary to form the passive is the past participle.

Germanic has an indicative mood similar to that of PIE. However, it has blended the subjunctive and optative moods of PIE. The new mood derived from this coalescence is formally derived in most verbs from the PIE optative, and it has two subjunctive forms: OE., heolde that he may have held, the preterite value which is in contrast with the subjunctive (ancient optative) OE., healde that he may hold. The imperative form has persisted in Germanic: OE., heald hold corresponds to the present indicative, healde I hold; there is no like correspondence for the preterite heold I have held.

Whereas PIE had a singular, dual, and plural numbers, the Modern Germanic languages have retained only the singular and the plural. For all practical purposes they have dropped the dual number. There are traces of it as late as Old English, e.g., the pronominal system: 1st per. dual, nom., wit we two. Other cases of its appearances in the language would be mainly dialectical.

Inflectional endings are still to be found in the verbal system of the Germanic languages. However, this feature will vary in complexity from one language to another. (By complexity it is meant the number of forms that will be inflected). For instance, the present indicative forms of Modern English will show only the 3rd per. sg. as being inflected; while in Modern German there will be, at least, three forms inflected, if not more. Detailed explanation and original research would be necessary to demonstrate clearly the relationship of the modern language inflections with those of the PIE verbal system. There are many unsolved problems in this area, that is,

showing the diachronic connection of the Germanic verbal system with the PIE athematic and thematic verb forms.

Except in the case of intransitive verbs which keep their active meaning e.g., is lying, Germanic has retained only one present and one past participle: OE., bindende binding, bunden bound.

Lastly there is the infinitive. In PIE this word existed only with a special grammatical form. If a word was independent of a grammatical category, then it was of no value. Hence our understanding of the infinitive in Germanic would have been of no value in PIE. But this feature of the language has changed and such a category now has full and proper value. Since the present was no longer expressed in a particular aspect of an action, the infinitive became attached to this group. But this was not to say that the infinitive was either non-past or past. Instead it expressed the general idea of the verb: OE., singan to sing.

Although the Germanic verbal structure has equivalent counterparts in some of the other PIE languages, it still represents something quite new in comparison to the PIE verbal structure.

iii) Old English Strong Verbs

Old English Strong Verbs show all the general characteristics of the Germanic verb; and more specifically, all the unique features of the Germanic Strong Verb. Therefore reflecting the Germanic system, the Old English verb has four tense-stems:. i) a present-stem for present forms; ii) a preterite-stem for the 1st and 3rd person singular indicative forms; iii) a preterite-stem for the 2nd person singular indicative and all plural forms of the present indicative; and iv) a past participle. When discussing or making references to the verbal system, the following four stems are usually used as examples: the infinitive, the 1st person singular indicative, the 1st person plural indicative, and the past participle. It is in the root vowel of each of these forms that ablaut-pattern for the verb is demonstrated.

Present

The majority of the Old English Strong Verbs are derived from the PIE thematic verb type with a root accent. Other smaller groups of these verbs are based: i) on various types of presents with j-suffixes, e.g., certain Old English Strong Verbs of Class V: sittan ⟵ *sitjan to sit; ii) on the athematic verb type, e.g., a few isolated examples like OE., dōn to do; iii) verbs with nasal suffixes, e.g., certain Old English verbs of Class III: rinnan (*-nw- ⟶ nn) to run; iv) presents with nasal infixes, e.g., OE., fāhan ⟵ *faŋXanan to catch, standan to stand; v) verbs of reduplication classified as Class VII, e.g., gangan to go. (Prokosch 1939: 147f)

Yet there are differences, because Germanic has included among those thematic derived verbs others of a different structure: OE., binde

I bind. This verb form has no equivalent outside Germanic. Then there is OE., bite I bite which is paralleled to a differently constituted and more archaic present, Sk., bhinadmi I split. The PIE root *ĝheu- to pour which provided an athematic present took on a secondary suffix, *-de-. From this suffix combination a present of the thematic type was formed: OE., gēotan to pour with the feature of a root present. (Meillet 1970:72)

Preterite

The preterite of the Old English Strong Verb is believed to be based on the PIE perfect. This was an athematic type verb with special endings (see Personal Inflections: chapter 1). This perfect existed with or without reduplication. Those forms without reduplication reflect a present founded on a form with the root vowel e: OE., band I have bound, beside binde I bind. Traces of a preterite with reduplication are found in forms where the present has a special vowel formation, and where the perfect is not characterized by the vowel. Gothic best exemplifies this feature: Go., haihait he has named/ haihaitum they have named. Although, Old English does show some remnants of it: OE., hē(h)t I commanded, reord I have advised.

Generally speaking, reduplication does not blend in well with the Germanic Strong Verbs. This is because of the accent position. Germanic has stabilized, in opposition to PIE, its accent on the initial syllable. Thus it gave it a prominent position and underminded the capacity for reduplication. There are a few exceptions, however, in the dialects:

	Old English		(Gothic)
	inf.	pret.	
to call	hatan	hĕht/hēt	(haihait)
to advise	rǣdan	reord/rēd	(rairōþ)
to play	lācan	leolc/	(lailaik)
to let	lǣtan	leort/lēt	(lailōt) (Sievers 1970:297)

Hence, on this basis, preterites with reduplication were brought back into the generality of Strong Verb preterites; but as a development of a dialect.

Past Participle

The vocalism of the past participle is generally considered to be very stable. However, there are a few circumstances, which we shall see later, where the root vowel does change. The vocalism in the past participle is derived from an original zero degree.

The present (infinitive), the preterites, and the past participle are discussed in relation to one another because on the basis of any one form, the other forms can be constructed. So if a new preterite were formed, by analogy with the system, a preterite and a past participle could also be formed.

Formation of Tenses:

Classes I-V: The root vowel of the present-stem in Old English is derived from PIE *e, and Classes I-V "were distinguished by the sound which followed it:". (Campbell 1959:302) In Old English this gave Class I i ⟵ PIE *ei: drifan/ to drive; Class II ēo ⟵ PIE *eu: flēogan to fly; Class III i with a liquid or nasal + consonant: bindan to bind; Class IV with a nasal + consonant, before single m, and before a liquid e remains: beran to bear; Class V e + some other consonant: etan to eat.

The root vowel of the first preterite is derived from PIE *o. Class I has ā ⟵ PIE *oi: drāf I drove; Class II ēa ⟵ PIE *ou: flēag I flew; Class III, IV and V have a (æ) ⟵ PIE *o, and subjected to the same conditions as those in the present: band I bound, bær I bore, and æt I ate.

The second preterite stem (for the 2nd singular and plural indicatives) has a vocalism derived from the PIE sonant vowels i/u, or a derivative from a vocalic resonant, l r m n. These resulted in Old English as i/u, or ul ur um un (see Chapter III) "This reduction of vocalism was clearly due to absence of accent from the root syllable,..." (Campbell 1959: 304) Class I drifon they drove; Class II flugon they flew; Class III bundon they bound; Class IV, were subjected to conditioning: bæron they bore; Class V æton they ate.

The past participle for Class I-III is based upon the same original root vowel as that of the second preterite. But in Germanic a root vowel u ⟶ o, unless followed by a nasal. Hence we have for the past participle: Class I drifon driven; Class II flogen flown; Class III bundon bound. For Classes IV and V the past participle shows a reduction of the root vowel shown in the infinitive. In PIE because the vocalism occurred before a single consonant the reduction was not complete; but instead, it changed to ə, schwa secundum: Class IV bæron borne; Class V eten eaten.

Certain verbs have been classified according to the first five classes, although they did not adher to the full ablaut-pattern. In these cases, while there are dissimilarities with certain features, there are similarities with others. In Classes I, II, and IV there are some aorist presents with a reduced grade of ablaut: cuman to come. Some verbs in

Class II have u and not eo in the infinitive: brucan to enjoy. Such an intrusion is not clear, but it appears to be more than analogy. Other verbs are classified with Class III, but they appear to have the same origin as Class V. In these cases their presents were extended by the addition of a dental element: OE., streg-d-an to strew, feoh-t-an to fight. With this particular group, the Class III vocalism was adopted. Finally, there is the 'weak-present' verb with a preterite and a past participle alike to Class V: OE., biddan ⟵ *bidian to ask. (Campbell 1959:303)

Classes VI and VII: Both classes have an unaccented vocalism in the infinitive, and this vocalism is extended to the past participle. The first preterite, on the other hand, has an accented vowel, which is usually lengthened or diphthongized, and is extended to the second preterite: Class VI standan to stand, stōd I stood, stōdon they stood, standen stood; Class VII feallan to fall, fēoll I fell, fēollon they fell, feallen fallen.

In environments where l or n follow the vocalism, the vowel is usually e; however, there are a few exceptions: OE., fōn to take, hōn to hang, feallan to fall. Classes VI and VII also show 'weak-presents', e.g., hebban to raise; and n-infixes, e.g., OE., sta-n-dan to stand.

Finally, there are two groups of verbs included in Class VII whose forms do not comply with previously stated features. One showed PIE ē/ō in the present, ō in the preterites, and all root vowels are accented. These show ē/ēo as preterite vowels in Old English, e.g., lǣtan to allow, lēt he allowed. The other showed an original u in the past tenses, which was extended in Old English, e.g., PGmc *blǣuan ⟶ OE., blāwan to blow. The expected past should show ēo ⟵ (eu). The past participle has ē/ēo by analogy. (Campbell 1959:306)

STRONG VERBS FROM OLD TO MIDDLE TO MODERN ENGLISH

As is evident by this time, it has not been my intention to discuss all features of the Strong Verbs in their diachronic development, especially those of consonantal changes and influences; nor is it my intention to do so now. Instead, the scope of this paper has been restricted to the predominant feature of the Strong Verbs, that is, ablaut or vowel-gradation. To deal with all features would have required a certain amount of reconstruction in PGmc. Whereas, by being restricted only to the evolution of ablaut, Common Germanic (hereafter, C Gmc) forms could be used for general purposes; while the PGmc vowels could still be used to show direct relationships.

Since this research was instigated by the vocalic alternations as seen in the Modern English Strong (Irregular) Verb (as opposed to any alternation seen in the Modern English Weak (Regular) Verbs, e.g., think - thought - thought), it was thought best to remain with this feature in its entirety in tracing the diachronic development. Frequently many important and indeed interesting areas were passed-over, or at times dealt with only slightly, in order to retain a clearer and stronger presentation.

To attempt an explanation of the many dialectical and complex consonantal influences on ablaut at this stage of development, not only would produce a volume of additional material; it would require a separate field of research. Such an attempt would be repetitious since comprehensive work by such scholars as Joseph Wright, A. M. Campbell, Eduard Sievers and others have already been done in this area.

Using only those strong verbs which presently exist in Modern English (and here there is much room for debate) we will present data to demonstrate two areas: specifically, the continued expansion of ablaut from

a system of three possible patterns in PIE, beyond the seven basic patterns in Old English, into a multiplicity of patterns in Modern English; generally, examples incorporating these patterns in Old, Middle and Modern English. The structural pattern of the Old English seven classes of Strong Verbs will be used here. Because of the rapid expansion of ablaut and the break-down of any systematic patterns, all verbs will be listed in alphabetical order according to Modern English. After each listing a C Gmc base, if available, and a PIE root will be given.

In concluding this chapter, some attention will be given to certain irregularities which, for the most part, have entered English during one of the stages from Old through Modern English and need further commentary.

CLASS I:

	1st stem	2nd stem	3rd stem	4th stem
Old English:	ī	ā	i	i
Middle English:	ī	ă/ŏ		ĭ
Modern English:	i	i/o/u		i/u/o

VERBS:		infinitive	pret. sg.	pret. pl.	past part.
1.	OE.	ā-bīdan	ā-bād	ā-bidon	ā-biden
	ME.	abīden abide	abōd abood		abiden
	MnE.	abide	abode abided		abidden abided
	C Gmc.	bī-			
	PIE	*ai-bheidh-			
2.	OE.	drīfan	drāf	drifon	drifen
	ME.	drīfen drive	drāf drof		drifen driven
	MnE.	drive	drove		driven
	C Gmc.	drīb-			
	PIE	*dreibh-			
3.	OE.	rīdan	rād	ridon	riden
	ME.	rīden ride	rād rood		riden
	MnE.	ride	rode		ridden
	C Gmc.	rīd-			
	PIE	*reidh-			

4.	OE.	rīsan	rās	rison	risen
	ME.	rīsen rise	rās raas roos		risen
	MnE.	rise	rose		risen
	C Gmc.	reis-			
	PIE	*rei-			
5.	OE.	scīnan	scān	scinon	scinen
	ME.	schīnen schine	schān schan schon		scinen shinen
	MnE.	shine	shone shined		shone shined
	C Gmc.	skī(n)-			
	PIE	*skī-			
6.	OE.	scrīfan	scrāf	scrifon	scrifen
	ME.	schriven schrive	scrāf schraf schrof		schrifen schriven
	MnE.	shrive	shrove shrived		shriven
	C Gmc.	skreīb-			
	PIE	*(s)kerībh-			
7.	OE.	smītan	smāt	smiton	smiten
	ME.	smīten smite	smāt smat smot		smiten
	MnE.	smite	smote		smitten
	C Gmc.	smīþ-			
	PIE	*(s)mēi-			

8.	OE.	strīdan	strād	stridon	striden
	ME.	strīden stride	strād strood		strīden
	MnE.	stride	strode		stridden
	C Gmc.	streid-			
	PIE	*streī-dh-			
9.	OE.	strīcan	strāc	stricon	stricen
	ME.	striken strike	strāc strōk strook		striken
	MnE.	strike	struck		stricken struck
	C Gmc.	streik-			
	PIE	*streig-			
10.	OE.	wrītan	wrāt	writon	writen
	ME.	wrīten writ	wrāt wrat wrot		writen
	MnE.	write	wrote		written
	C Gmc.	wreit-			
	PIE	*wreid-			

CLASS II:

Old English:	ēo(ū)	ēa		u	o
Middle English:	ĕo/ĕ/ū/ou/o	ēa/æ/ĕ/ei/ŏ/u/eu			o/u
Modern English:	i/ē/ea/ō	i/o/a/eu/ea/ē			i/o/ea/ē
11. OE.	cēosan	cēas	curon		coren
ME.	chēosen cheose	chēas choos			coren chusen chosen
MnE.	choose	chose			chosen
C Gmc.	keus-				
PIE	*geus-				
12. OE.	clēofan	clēaf	clufon		clofen
ME.	clēoven cleove cleve	clēf clēef clove			clofen cloven
MnE.	cleave	clave cleaved			cleaved
C Gmc.	kleuƀ-				
PIE	*gleubh-				
13. OE.	dȳfan dūfan	dēaf	dufon		dofen
ME.	dūven douve dove	deæf			doven
MnE.	dive	dove dived			dived
C Gmc.	deuƀ-				
PIE	*dheu-b-				

14.	OE.	flēogan flēon	flēah	flugon	flogen
	ME.	flēogen flēon flēn fleen flee	fl(ē)ah fleh fleih flu flew		flowen flown
	MnE.	fly	flew		flown
	C Gmc.	fleug-			
	PIE	*pleu-k-			
15.	OE.	frēosan	frēas	fruron	fruren froren
	ME.	frēosen frese	frēs frees frose		froren frosen
	MnE.	freeze	froze		frozen
	C Gmc.	freus-			
	PIE	*preus-			
16.	OE.	sēoðan	sēaðe	sudon	soden
	ME.	sēþen sethe	sē ðe seth		soden
	MnE.	seethe	sod seethed		sodden seethen seethed
	C Gmc.	seuþ-			
	PIE	*seu-t-			

CLASS III:

Old English:	i)	i + N + C	a/o	u	u
Middle English:		i/o/u	a/o/ou/u/i		o/u/ou
Modern English:		i/u	a/o/ou/u		o/ou/u
17. OE.		bi-ginnan	bi-gann	bi-gunnon	bi-gunnen
ME.		bi-ginnen bi-ginne	bi-gan be-gan		bi-gunnen
MnE.		begin	began		begun
C Gmc.		bi- ginn-			
PIE		*bhe- + ghi(n)			
18. OE.		bindan	band bond	bundon	bunden
ME.		binden binde bind	band bond bounde		b(o)unden bounden
MnE.		bind	bound band		bound
C Gmc.		bind-			
PIE		*bhendh-			
19. OE.		bringan (brengan-wk)	brang	brungon	brungen
ME.		bringen bringe	brõhte (wk.)		brungen
MnE.		bring	brang		brung
C Gmc.		breŋg-			
PIE		*bhrenk-			
20. OE.		clingan	clung	clungon	clungen
ME.		clingen	clang clung		clungen clunge

	MnE.	cling	clung clang		clung
	C Gmc.	klang-			
	PIE	*gle(n)k-			
21.	OE.	drincan	dranc	druncon	druncen
	ME.	drinken drinke	drank		drunken drunk
	MnE.	drink	drank		drunk
	C Gmc.	drenk-			
	PIE	*dhreĝ-			
22.	OE.	findan	fand	fundon	funden
	ME.	finden	fand fond fund		founden founde
	MnE.	find	found		found
	C Gmc.	finþ-			
	PIE	*pent-			
23.	OE.	grindan	grond	grundon	grunden
	ME.	grinden grinde	grond		grunden ground
	MnE.	grind	ground		ground
	C Gmc.	grend-			
	PIE	*ghre(n)-dh-			
24.	OE.	hringan	hringde	hringdon	ringinde(n)
	ME.	ringen	ringde rang		rungen
	MnE.	ring	rang		rung

	C Gmc.	Xreŋg-			
	PIE	*krek-			
25.	OE.	rinnan	ran	urnon	urnen
	ME.	rinnen runnen ronnen rinne	ran		runnen ronnen urnen
	MnE.	run	ran		run
	C Gmc.	reŋt-			
	PIE	*er-			
26.	OE.	scrincan	scranc	scruncon	scruncen
	ME.	schrinken schrinke shrink	schrank schronk shrunke		shrunken
	MnE.	shrink	shrank shrunk		shrunken shrunk
	C Gmc.	skriŋk-			
	PIE	*(s)kreng-			
27.	OE.	sincan	sanc	suncon	suncen
	ME.	sinken sinke	sank sonke		sunken
	MnE.	sink	sank		sunk
	C Gmc.	seŋkw-			
	PIE	*seng^{w}-			
28.	OE.	singan	sang	sungon	sungen
	ME.	singen singe	sange song		sungen sunge
	MnE.	sing	sang sung		sung

	C Gmc.	sanŋ-			
	PIE	*seng^{w}h-			
29.	OE.	slingan	slang	slungon	slungen
	ME.	slingen	slang slong slunge		slungen
	MnE.	sling	slang slung		slung
	C Gmc.	slenŋw-			
	PIE	*sleng-			
30.	OE.	slincan	slanc	sluncon	sluncen
	ME.	slinken			slunken
	MnE.	slink	slank slunk		slunken slunk slinked
	PIE	*sleng-			
31.	OE.	spinnan	spann	spunnon	spunnen
	ME.	spinnen spinne	span sponne		sponnen
	MnE.	spin	span spun		spun
	C Gmc.	spen-			
	PIE-	*spen-			
32.	OE.	springan	sprang	sprungon	sprungen
	ME.	springen springe	sprang sprong		sprungen sprunge
	MnE.	spring	sprang sprung		sprung
	C Gmc.	spreŋg-			
	PIE	*spre(n)ĝh-			

33.	OE.	stingan	stang	stungon	stungen
	ME.	stingen	stang, stong		stungen
	MnE.	sting	stang stung		stung
	C Gmc.	steŋg-			
	PIE	*stengh-			
34.	OE.	stincan	stanc	stuncon	stuncen
	ME.	stinken stinke	stank		stunken
	MnE.	stink	stank stunk		stunk
	C Gmc.	stiŋkw-			
	PIE	*(s)teu(n)-g-			
35.	OE.	swimman	swam(m)	swummon	swummen
	ME.	swimmen swimme	swam		swummen
	MnE.	swim	swam		swum
	C Gmc.	swem-			
	PIE	*swem-			
36.	OE.	swingan	swang	swungon	swungen
	ME.	swingen swinge	swang swong		swungen
	MnE.	swing	swang swung		swung
	C Gmc.	sweŋg-			
	PIE	*sweng-			

37.	OE.	winnan	wann	wonn	wunnen
	ME.	winnen	wan		wonnen wunnen wunne
	MnE.	win	won		won
	C Gmc.	wen-			
	PIE	*wen-			
38.	OE.	windan	wand	wundon	wunden
	ME.	winden winde	wand wond		wunden wonden wounden
	MnE.	wind	wound		wound
	C Gmc.	wend-			
	PIE	*wendh-			
39.	OE.	wringan	wrang	wrungon	wrungen
	ME.	wringen wringe	wrang wrong		wrungen
	MnE.	wring	wrang		wrung
	C Gmc.	wrang-			
	PIE	*wre(n)g-			
	Old English: ii)	e + l + C	ea	u	o
	Middle English:	e	a		o
	Modern English:	e	e/a		o/e
40.	OE.	meltan	mealt	multon	molten
	ME.	melten melte	malt		molten
	MnE.	melt	malt melted		molten

	C Gmc.	malt-			
	PIE	*ml-d-			
41.	OE.	swellan	sweall	swullon	swollen
	ME.	swellen swelle	swal		swollen swolle
	MnE.	swell	swelled		swollen swelled
	C Gmc.	swel-			
	PIE	*swel-			
	Old English: iii)	e + C	a	u	o
	Middle English:	ī	o/a		i
	Modern English:	i	o		i
42.	OE.	þēon	þāh	þungon	þungen
	ME.	þrīfen þrive	þrāf þrof		þriven
	MnE.	thrive	throve		thriven
	C Gmc.	þiŋX-			
	PIE	*(s)teu-k-			

CLASS IV:

	Old English:	e + l	æ	ǣ	o
	Middle English:	ĕ/o/u	æ/a/o/e		o
	Modern English:	ea/o	a/o		a/o
43.	OE.	beran	bær	bǣron	boren
	ME.	bēren bere	ber bar bare		boren bore
	MnE.	bear	bore		born(e)
	C Gmc.	ber-			
	PIE	*bher-			
44.	OE.	brecan	bræc	brǣcon	brocen
	ME.	breken breke	bræk		broken
	MnE.	break	broke		broken
	C Gmc.	brek-			
	PIE	*bhreg-			
45.	OE.	scieran	scear	scēaron	scoren
	ME.	sceren scheren	scar schar		schoren schorn
	MnE.	shear	share shore shared		shorn shared
	C Gmc.	sker-			
	PIE	*(s)ker-			
46.	OE.	stelan	stæl	stǣlon	stolen
	ME.	stelen stele	stal		stolen

	MnE.	steal	stole		stolen
	C Gmc.	stel-			
	PIE	*stel-			
47.	OE.	teran	tær	tæron	toren
	ME.	teren tere	tar		toren tore
	MnE.	tear	tore		torn
	C Gmc.	ter-			
	PIE	*der-			
48.	OE.	cuman	c(w)ōm	c(w)ōmon	cumen
	ME.	cumen comen cume come	cam come		comen
	MnE.	come	came		come
	C Gmc.	k(w)em-			
	PIE	*q^{w}em-			

CLASS V:

Old English:		e	æ	ǣ	e
Middle English:		i/ĕ/ie/ea/eo	æ/a/e/æ	i/ai/au/ea	i/ĕ/ei/o
Modern English:		i/ĕ/ea/ie	a/ai/o/i		ē/i/ai/ea/o
49.	OE.	biddan	bæd	bǣdon	beden
	ME.	bidden bidde	bæd bead bade		beden
	MnE.	bid	bade bid		bidden
	C Gmc.	bid-			
	PIE	*bheidh-			
50.	OE.	etan	æt	ǣton	eten
	ME.	eten eoten eaten	æt et at		eten etten
	MnE.	eat	ate		eaten
	C Gmc.	et-			
	PIE	*ed-			
51.	OE.	gietan	geat	gēaton	gieten
	ME.	geten gete	gat		getten goten
	MnE.	get	got		gotten got
	C Gmc.	get-			
	PIE	*ĝheu-			
52.	OE.	giefan	geaf	gēafon	giefen
	ME.	gifen give	geaf gaf gave		gifen given

	MnE.	give	gave		given
	C Gmc.	geb-			
	PIE	*ghabh-			
53.	OE.	licgan	læg	lǣgon	legen
	ME.	liggen liēn ligge	læi(g)e laig lai		leien lein
	MnE.	lie	lay		lain
	C Gmc.	lig-			
	PIE	*legh-			
54.	OE.	sēon	seah	sāwon sǣgon	sewen
	ME.	sien sen seen	sah sauh saugh sau saw		seghen segen seien sein seen
	MnE.	see	saw		seen
	C Gmc.	seXw-			
	PIE	*seik^{W}-			
55.	OE.	sittan	sæt	sǣton	seten
	ME.	sitten sitte	sat		seten siten
	MnE.	sit	sat		sitten sat
	C Gmc.	sit-			
	PIE	*sed-			

56.	OE.	sprecan	spræc	sprǣcon	specen
	ME.	speken speke	spræk spake		spocen spoken
	MnE.	speak	spoke		spoken
	C Gmc.	sprak-			
	PIE	*speg͡-			
57.	OE.	tredan	træd	trǣdon	treden
	ME.	treden trede	trad		treden troden
	MnE.	tread	trod		trodden
	C Gmc.	treð-			
	PIE	*dru-to-			
58.	OE.	wefan	wæf	wǣfon	wefen
	ME.	weven	waf wof		woven
	MnE.	weave	wove		woven
	C Gmc.	weiƀ-			
	PIE	*webh-			

CLASS VI:

Old English:		a	ō	ō	æ/ā
Middle English:		æ/ā/au/ę̄/ēa	ǭ/ou/eu		a/au/e/o/aí
Modern English:		a/ai/ea/au	eu/a/ō̤/ea		a/ai/ō̤/au
59.	OE.	a-wacan a-wæcan	a-wōc		wæcned
	ME.	awaken awake	awōk awook awoke		awaken awake
	MnE.	awake	awoke awaked		awoken awaked
	C Gmc.	wak-			
	PIE	*a-weĝ-			
60.	OE.	dragan	drōg drēog	drōgon	dragen
	ME.	dragen drahen drahe drawe	drōh droh dreug drew		draghen drawen
	MnE.	draw	drew		drawn
	PIE	*dherāgh-			
61.	OE.	flēan	flōg	flōgon	flagen
	ME.	flēan flēn fleen	flōgh		flawen
	MnE.	flay	flog		floggen
	C Gmc.	flaX-			
	PIE	*plēk-			

62.	OE.	for-sacan	for-sōc		forsacen
	ME.	forsaken forsake	forsōc forsook		forsaken forsake
	MnE.	forsake	forsook		forsaken
	C Gmc.	sak-			
	PIE	*pur + *sag			
63.	OE.	gnagan	gnōg	gnōgon	gnagen
	ME.	gnagen gnawen gnawe	gnōgh gnoug gnou gneu		gnawen
	MnE.	gnaw	gnew gnawed		gnawn gnawed
	PIE	*ghnēgh-			
64.	OE.	hebban	hōf	hōfon	hafen
	ME.	hebben hæben heve	hōf hof hove		hofen hoven
	MnE.	heave	hove heaved		hoven hove heaved
	C Gmc.	χab-			
	PIE	*kap-			
65.	OE.	sceacan	sceōc	sceōcon	sceacen
	ME.	schaken schake shake	schōk shook		schaken
	MnE.	shake	shook		shaken
	C Gmc.	skak-			
	PIE	*skag-			

66.	OE.	slēan	slōg	slōgon	slagen
	ME.	slēan slæn slee	slōh slogh slouh sleu		slegen slagen slawen slain
	MnE.	slay	slew		slain
	C Gmc.	slaX-			
	PIE	*slak-			
67.	OE.	standan	stōd	stōdon	standen
	ME.	standen stande	stōd stood		standen
	MnE.	stand	stood		stood
	C Gmc.	stand-			
	PIE	*stā-			
68.	OE.	swerian	swōr	swōron	sworen (swaren) rare
	ME.	swerien swere	swōr swor		sworen
	MnE.	swear	swore		sworen
	C Gmc.	swer-			
	PIE	*swer-			
69.	OE.	tacan	tōc	tōcon	tacen
	ME.	tāken take	tōk		taken
	MnE.	take	took		taken
	PIE	*dēg-			

CLASS VII:

Old English:	ǣ/ă̄/ē/ēa/o	ē/ēo	ê/ĕo	æ/a/ĕ̄a/ō
Middle English:	ē/ea/æ/ă̄/au/ŏ̄	ĕ̄/ĕ̄u/ĕ̄o/ea/o/ie/e		e/ă̄/ŏ̄/ou/āu
Modern English:	a/o/ea/ou	e/a/u/ea/eu		e/a/o/u/ea/ou

70.	OE.	bēatan	bēot	bēotan	bēaten
	ME.	bēten bæten beat	bētte bette		bet
	MnE.	beat	beat bet		beaten
	C Gmc.	baut-			
	PIE	*bhāt-			
71.	OE.	blāwan	blēow	blēowon	blāwen
	ME.	blāwen blauwen blaue bloau blowe	blēow bleow bleou bleu		blawen blowen
	MnE.	blow	blew		blown
	C Gmc.	blō-			
	PIE	*bhlō-			
72.	OE.	crāwan	crēow	crēowon	crāwen
	ME.	crāwen crowe	crēow creu crew		crōwen crowe
	MnE.	crow	crew crowed		crown crowed
	PIE	*grā-			

73.	OE.	feallan	fēoll		feallen
	ME.	fallen falle	fēol feol fel fell		fallen
	MnE.	fall	fell		fallen
	C Gmc.	fal-			
	PIE	*pelu-			
74.	OE.	gangan gan	gēong gīong		gangen
	ME.	gangen gan gan gon	wenden < OE. wendan		gangende gan
	MnE.	go	went		gone
	C Gmc.	gai-			
	PIE	*gha-			
75.	OE.	grōwan	grēow		grōwen
	ME.	grōwen growe	grēu grew		grōwen growen
	MnE.	grow	grew		grown
	C Gmc.	grō-			
	PIE	*ghrō-			
76.	OE.	hōngian hōn	hēng	hēngon	hangen
	ME.	hōn	hong		hangan
	MnE.	hang	hung hang hanged		hung hanged
	C Gmc.	XaŋX-			
	PIE	*kenk-			

77.	OE.	healdan	hēold	healden
	ME.	healden hælden halden holden	hēold heold heald held	halden holden
	MnE.	hold	held	held
	C Gmc.	*χul-		
	PIE	*kel-		
78.	OE.	cnāwan	cnēow	cnāwen
	ME.	cnāwen knawe knaue knowe	cnēow kneow kneu knew	knāwen knowen
	MnE.	know	knew	known
	PIE	*gene-		
79.	OE.	sāwan	sēow	sāwen
	ME.	sāwen sāwe sowen sowe	sēow siew sew	sawen sowen
	MnE.	sow	sew sowed	sown sowed
	C Gmc.	sæj-		
	PIE	*sēj-		
80.	OE.	þrāwan	þrēow	þrāwen
	ME.	þrāwen þrawe þrowe	þrēou þrewe	þrāwen þrowen
	MnE.	throw	threw	thrown
	PIE	*teru-		

irregularities

As there have been losses of strong verbs from English during its development; so have there been gains. This makes it very difficult to be comprehensive when stating what verbs are considered strong, and what are not. Who determines what is and what is not an archaic form? While dialectically one form is accepted, another is rejected. Therefore, I make no claims to be exhaustive in my selection, nor in my rejection of strong verbs in Modern English. The forms chosen above represent a greater majority of strong verbs in present-day usage.

The irregularities, for the most part, demonstrate the processes through which new forms came into the language, and how others were altered.

81.	OE.	dōn	dyde	dydon	dōn
	ME.	dōn	dude dide		dōn
	MnE.	do	did		done
	PIE	*dhō-m			

In Modern English this verb is placed in the strong verb category. However, in Old English it was placed in a separate classification called 'Anomalous Verbs'. These verbs presented many difficulties of formation. (Campbell 1959:346)

82.	OE.	durran dearr	dorste	dorston	dorren
	ME.	durren durre	dorste durste		durst
	MnE.	dare	durst dared		dared
	C Gmc.	ders-			
	PIE	*dhers-			

Although classified as a strong verb, this verb is somewhat like Modern English do in that it belonged to a separate classification in Old English. It is included with a small group of verbs, mostly auxiliaries, which in the present have the form of a strong preterite. These were originally old strong preterites with modified meanings. (Campbell 1959:343)

83.	OE.	werian	werede	wered
	ME.	weren were	weorede	wered
	MnE.	wear	wore	worn
	C Gmc.	was-		
	PIE	*wer-		

The Old English and Middle English forms belong to the Weak Verbs, Class I. However, the Modern English ablaut pattern is based on analogy with Modern English swear, swore, sworn from Old English swerian to swear.

84.	OE.	streng		
	ME.	strengen	strang	strung
	MnE.	string	strang strung	strung
	C Gmc.	strang-		
	PIE	*streng-		

On the basis of an Old English noun, streng string, Middle English formed a strong verb strengen to string. From there it was extended analogically according to Middle English singen to sing. The Modern English forms are derived from Middle English.

85.	OE.	spittan spǣtan	spǣtte	
	ME.	spitten spǣten	spitte spǣtte spette	
	MnE.	spit	spat spit	spitten spat spit
	C Gmc.	spit-		
	PIE	*spyēu-	(imitative base)	

Here we have a case of two Old English Weak Verbs becoming fused. According to Price the resultant form(s) are categorized with Class V of the strong verbs, although not all forms were given. (Price 1970:136) No doubt a certain amount of analogical levelling was involved.

86.	OE.	stecan stician	stac sticode	sticod
	ME.	sticken sticke	sticked	sticked
	MnE.	stick	stuck	stuck
	C Gmc.	stik-		
	PIE	*steig-		

This is a second case of fusion. However, here an Old English Strong Verb, stecan <u>to stick</u>, combined with an Old English Weak Verb, stician <u>to stick</u>. The result is a regular Middle English Weak Verb. The Modern English verbs shows a vocalic alternation, thus categorizing it as a strong verb. The <u>u</u> of the Modern English past tense and part participle could be considered as a narrowing of close ō ⟶ ū, and then an early shortening of long ū ⟶ u. Where did the ō come from? It is believed to have been

through analogy with Middle English past participle spoken spoke. (Price 1970:137)

87. OE.

ME.	strīven	strivede strof strove	strived streven
MnE.	strive	strove	striven

The Middle English form, strīve(n) to strive, is the result of borrowing from Old French estriver —> early Modern French étriver of the same meaning. The verb is not found outside French, and so is believed to be of Germanic etymology. Hence, it appears to be a case of double borrowing: first from Germanic into Old French; then from Old French into Middle English. These are no Old English forms, so it appears that the ancient Germanic forms had been lost in Old English.

Certain scholars believe that Old French estriver is derived from estrif strife which is regarded as a modification of the older Old French estrit, and Old Germanic *strīdo - strife related to *strīdan to fight.

Others argue that the old French verb is related to Old Germanic *strīban to struggle, of which the ablaut-variant *strib- is represented by the weak verb, e.g., MLG., streven, MnG., streben to endeavor, struggle.

Each explanation poses certain difficulties; but the former seems more logical, yet the notion of 'conflict' and 'endeavor' easily pass the one into the other.

The strong forms of this verb (on the analogy of drive etc.) is found earlier than the weak forms (which would be normal for a verb borrowed

from French) and has always been the more frequent of the two. (Oxford English Dictionary).

88.	OE.	dīcian		
	ME.	diggin	digged	digged
	MnE.	dig	dug	dug

This is the most problematic Modern English Strong Verb that we have come across. The Old English form dīcian 'to make a dike' is given by J. R. Clark Hall's A Concise Anglo-Saxon Dictionary. None of the other sources mention it at the Old English stage. F. H. Stratmann's A Middle-English Dictionary states: "diggin, v., ? = dīkin; dig". He also provides the past tense and past participle form, digged, showing it to be a weak verb.

The Modern English forms draw a striking parallel to Modern English stick. However, while Price deals with the latter, he makes no mention of the former. There is always the suggestion that it was a borrowing. French diguer 'to make a dike does show some phonological connection.

CONCLUDING COMMENTS

The final stage of this paper will concern itself with one point, that is, a reconsideration of the presentation of ablaut patterns in the Germanic Strong Verbs.

In demonstrating the diachronic development of ablaut from PIE, it became evident in our switching to the use of C Gmc forms (that is, forms common to most Germanic languages but less comprehensive than those of PGmc) that we were in a troubled area. This area is referred to as PGmc and has been recognized both as a link between C Gmc and PIE, and also as an area in which much research is still required. Because of this, it is extremely difficult to trace a continuous progression of ablaut from PIE into C Gmc. To bridge this gap would require a great deal more reconstruction in PGmc, than we have; to narrow it would require, at best, a different approach.

Traditionally, PIE is viewed from the daughter languages (see diagram at the end of Chapter 1). This is natural since the daughter languages show the empirical evidence. But if the empirical evidence is reliable (a necessary belief without which there would be no science of comparative linguistics), then the different approach becomes only a matter of directions.

In a diagram, the traditional approach is:

1. PIE - - - - - - - - - - - - - - - -> PGmc <---------- C Gmc
   (reconstructed premise) (empirical evidence)

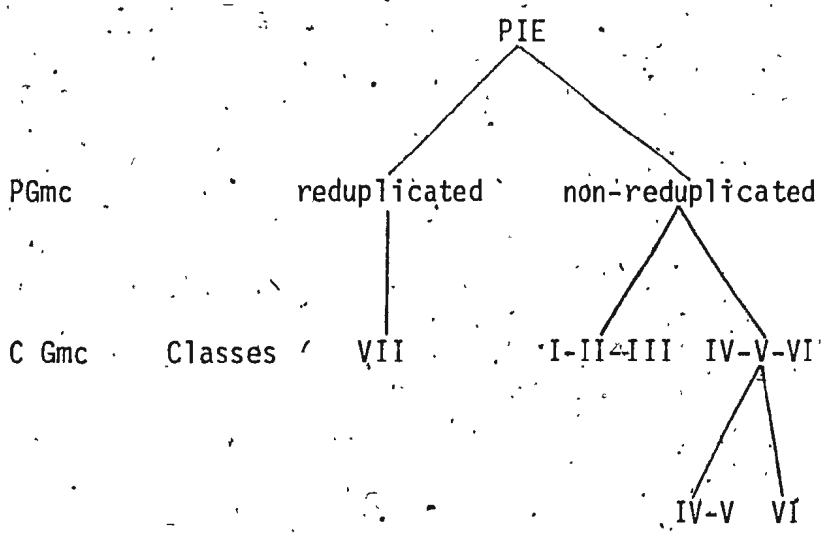
A reversal of approaches would allow for a new presentation which we believe to be clearer and more unified. Instead of viewing PIE from C Gmc, view C Gmc from PIE.

2. PIE - - - - - - - - - - - - - - - -> PGmc ----------> C Gmc
   (reconstructed premise) (empirical evidence)

On this basis that the Germanic Strong Verbs are derived from the binary division of the PIE reduplicated and non-reduplicated verbs, we can extend the reconstructed premise of PIE into PGmc. Thus is the gap narrowed because of the PGmc ablaut patterns which have been reconstructed.

This is now continued into a re-structured presentation of the seven classes of Germanic Strong Verbs:

3.



The diagram reads: from the binary division of certain verbs in PIE, we can view the Germanic Strong Verbs as reduplicated and non-reduplicated. The reduplicated verbs include C Gmc Class VII; the non-reduplicated verbs include Classes I to VI. Because reduplication is evident in C Gmc, e.g., Go., haihāh he hung, there is a direct relationship between Class VII and PIE. For the non-reduplicated verbs, Classes I to III show a direct relationship with PIE through the evolution of ablaut; while Classes IV to VI show only a partial relationship through ablaut. A further division in the partially related group can be made on the grounds that Classes IV and V clearly show partial relationship; while Class VI is believed to be a Germanic innovation.

This presentation demonstrates a more direct relationship with PIE in a diagrammatic form; and allows for presentation purposes, a clearer and more comprehensive picture of the seven classes of Germanic Strong Verbs.

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APPENDIX

PIE

*a-weĝ-
*ai-bheidh-
*bhāt-
*bhe-ghi(n)-
*bheidh-
*bhendh-
*bher-
*bhlō-
*bhreg-
*bhrenk-
*dēg-
*der-
*dherāgh-
*dhers-
*dheu-b-
*dhō-m-
*dhreĝ-
*dreibh-
*dru-to-
*ed-
*er-
*gene-
*ĝeus-
*gha-
*ghabh-
*ĝheu-
*ghnēgh-
*ghre(n)-dh-
*ghrō-
*gle(n)k-
*gleubh-
*grā-
*kap-
*kel-
*ĉenk-
*krek-
*legh-
*ml-d-
*plēk-
*pleu-
*pleu-k
*pent-
*preus-
*pur + *sag-
*qʷem-
*rei-
*reidh-
*sed-
*seikʷ-
*sēj-
*sengʷ-
*sengʷh-
*seu-t-
*skag-
*(s)ker-
*(s)kerībh-
*ŝkī-
*(s)kreng-
*slak-
*sleng-
*(s)mēi-
*speĝ-
*spen-
*spre(n)gh-

*spyēu-
*sta-
*steig-
*stel-
*stengh-
*(s)teu-k-
*(s)teu-(n)-g-
*strēi-dh-
*streig-
*streng-
*swel-
*swem-
*sweng-
*swer-
*teru-
*webh-
*wen-
*wendh-
*wer-
*wreid-
*wre(n)g-

C Gmc

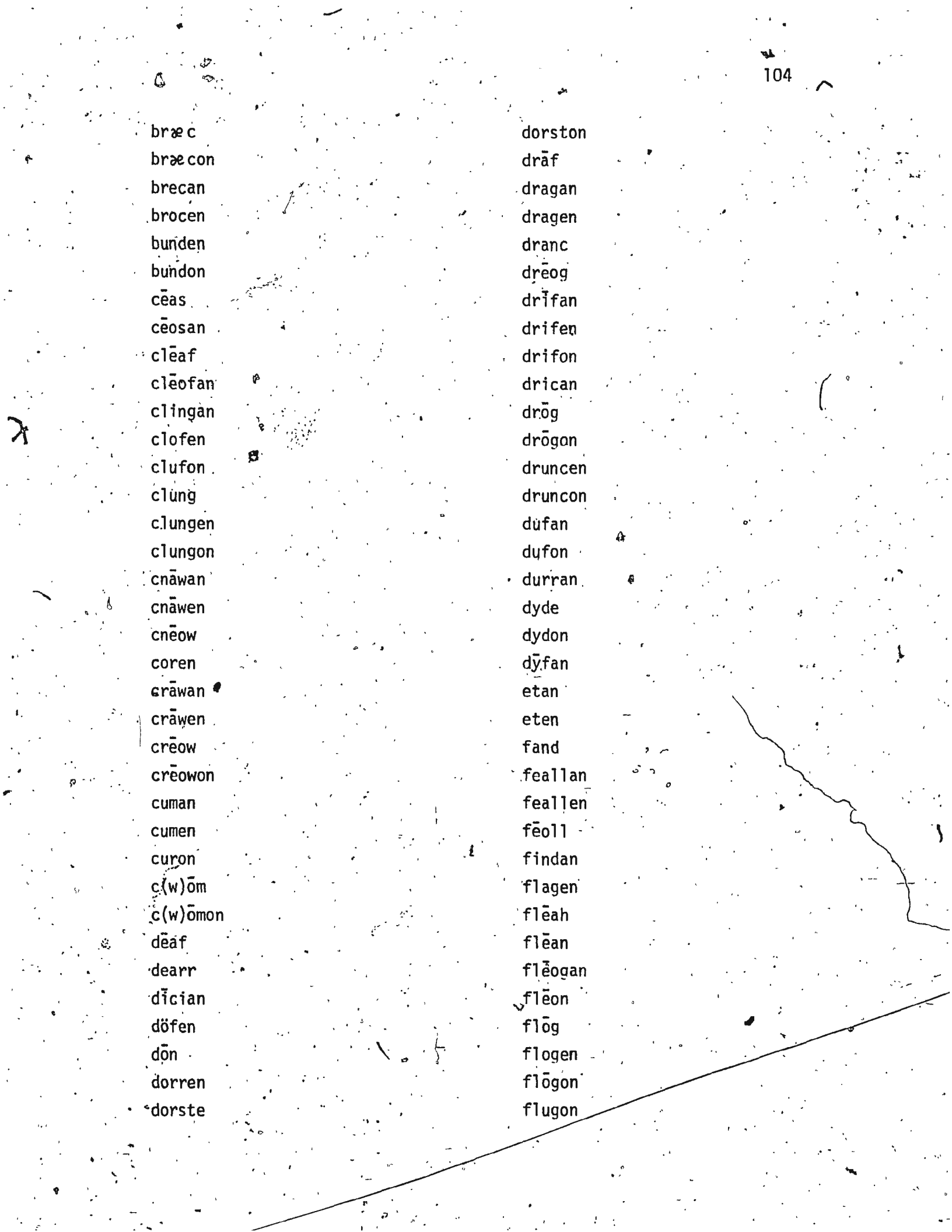
baut-
ber-
bid-
bīð-
bi-ginn-
bind-
blō-
brek-
breŋg-
ders-
deuþ-
drenk
drīb-
et-
fal-
finþ-
flaX-
fleug-
freus-
gai-
geb-
get-
grend-
grō-
keus-
klaŋg-
kleuþ-
k(w)em-
lig-
malt-
reis-
renn-
rīd-
sak-
saŋg-
sǣj-
seŋkw
seuþ-
seXw-
sit-
skak-
sker-
skī(n)-
skreiþ-
skriŋk-
slaX-
sleŋgw-

smiþ-
spen-
sphrak-
spit-
spreŋg-
stand-
stel-
steŋg-
stik-
stiŋkw-
straŋg-
streid-
streik-
swel-
swem-
sweŋg-
swer-
ter-
treð-
þiŋX-
wak-
was-
weiƀ-
weŋ-
weŋð-
wraŋg-
wreit-
Xaƀ-
XaŋX-
Xreŋg-
Xul-

OE.

ā-bād
a-bīdan
ā-bīden
ā-bidon
a-wacan
a-wæcan
a-wōc
æt
æton
band
bæd
bædon
bær
bæron
bēatan
bēaten
beden
bēot
bēotan
beran
biddan
bi-gann
bi-ginnan
bi-gunnon
bi-gunnon
bindan
blāwan
blāwen
blēow
blēowon
bond
boren
brang
brengan-wk
bringan
brungen
brungon

brǽc
brǽcon
brecan
brocen
bunden
bundon
cēas
cēosan
clēaf
clēofan
clingan
clofen
clufon
clung
clungen
clungon
cnāwan
cnāwen
cnēow
coren
crāwan
crāwen
crēow
crēowon
cuman
cumen
curon
c(w)ōm
c(w)ōmon
dēaf
dearr
dīcian
döfen
dōn
dorren
dorste
dorston
drāf
dragan
dragen
dranc
drēog
drīfan
drifen
drifon
drican
drōg
drōgon
druncen
druncon
dufan
dufon
durran
dyde
dydon
dȳfan
etan
eten
fand
feallan
feallen
fēoll
findan
flagen
flēah
flēan
flēogan
flēon
flōg
flogen
flōgon
flugon



for-sacan
forsacen
for-sōc
frēas
frēosan
frorен
fruren
fruron
funden
fundon
gan
gangan
gangen
geaf
gēafon
geat
gēaton
gēong
giefan
giefen
gietan
gieten
gīong
gnagan
gnagen
gnōg
gnōgon
grēow
grindan
grond
grōwan
grōwen
grunden
grundon
hafen

hangen
healdan
healden
hebban
hēng
hēngon
hēold
hōf
hōfon
hōn
hōngian
hringan
hringde
hringdon
læg
lægon
legen
licgan
mealt
meltan
molten
multon
rād
ran
ras
rīdan
riden
ridon
ringinde(n)
rinnan
rīsan
risen
sanc
sang
sāwan

sāwem
sāwon
sæt
sæton
scān
sceacan
sceacen
scear
scēaron
sceōc
sceocon
scieran
scīnan
scinen
scinon
scoren
scrāf
scranc
scrīfan
scrifen
scrifon
scrincan
scruncen
scruncon
seah
sēað-
sēoðan
sēon
sēow
seten
sewen
sincan
singan
sittan
slagen
slanc
slang
slēan
slincan
slingan
slōg
slōgon
sluncen
sluncon
slungen
slungon
smāt
smitan
smīten
smiton
soden
spann
spæc
spæcon
spætan
spætte
specen
spinnan
spittan
sprang
sprecan
springan
sprungen
sprungon
spunnen
spunnon
stac
stanc
standan
standen

stang
stæl
stælon
stecan
stelan
stician
sticod
sticode
stincan
stingan
stōd
stōdon
stolen
strāc
strād
streng
strīcan
strīcen
stricon
strīdan
striden
stridon
stuncen
stuncon
stungen
stungon
sudon
suncen
suncon
sungen
sungon
swam(m)
swang
sweall
swellan
swerian
swimman
swingan
swollen
swollon
swōr
sworen
swōron
swummen
swummon
swungen
swungon
tacan
tacen
tær
tæron
teran
tōc
tōcon
toren
træd
trædon
tredan
treden
þāh
þēon
þrāwan
þrāwen
þrēow
þungen
þungon
urnen
urnon
wand
wann

wæcned
wæf
wæfon
wefan
wefen
wered
werede
werian
windan
winnan
wonn
wrang
wrāt
wringan
wrītan
writen
writon
wrungen
wrungon
wunden
wundon
wunnen

ME.

abide
abīden
abiden
abōd
abood
at
awake
awaken
awōk
awoke
awook

æt
bade
band
bar
bare
bæd
bead
bæten
beat
beden
be-gan
ber
bere
bēren
bet
bēten
bētte
bette
bidden
bi-gan
bi-ginne
bi-ginnen
bi-gunnen
bind
binde
binden
blaue
blauwen
blāwen
blāwen
bleou
bleow
blēow
bleu
bloau

blowe
blowen
bond
bore
boren
bounde
bounden
b(o)unden
bræk
breke
breken
bringe
bringen
brōhte
broken
brungen
cam
chēas
cheose
chēosen
choos
chosen
chusen
clang
cleef
clēf
cleove
clēoven
cleve
clingen
clofen
clove
cloven
clung
clunge
clungen

cnāwen
cnēow
come
comen
coren
crāwen
crew
crēow
creu
crowe
crōwen
cūme
cumen
deæf
dide
diggin
dōn
dorste
douve
dove
doven
drāf
dragen
draghen
drahe
drahen
drank
drawe
drawen
dreug
drew
drīfen
drifen
drinke
drinken
drive

driven
drof
drōh
droh
drunk
drunken
dūde
durre
durren
durst
durste
dūven
eaten
eoten
et
eten
etten
falle
fallen
fand
fel
fell
fēol
feol
finden
flawen
fl(ē)ah
flēan
flee
fleen
fleh
fleih
flēn
flēogen
flēon
flew

flōgh
flowen
flōwn
flown
flu
fōnd
forsake
forsaken
forsōc
forsook
sounde
founden
frees
frēs
frese
frēosen
froren
frose
frosen
fund
gaf
gan
gān
gangen
gangende
gat
gave
geaf
gete
geten
getten
gifen
give
given
gnagen
gnawe

gnawen
gneu
gnōgh
gnou
gnoug
gon
goten
grēu
grew
grinde
grinden
grǫnd
ground
growe
grōwen
growen
grunden
halden
hangan
hæben
hælden
heald
healden
hebben
held
hēold
heold
heve
hōf
hof
hofen
holden
hōn
hong
hove
hoven

knawe
knaue
knāwen
kneow
kneu
knew
knowe
knowen
lai
laig
læi(g)e
leien
lein
lien
ligge
liggen
malt
melte
melten
molten
raas
rād
ran
rang
rās
ride
rīden
riden
ringde
ringen
rinne
rinnen
rise
rīsen
risen
rood

ronnen
roos
rung-
runnen
saugh
sah
sange
sank
sat
sau
sauh
saw
sāwe
sāwen
sawen
scar
sceren
schake
schaken
schān
schan
schar
schrank
scheren
schine
schīnen
schōk
schon
schorn
schoren
schraf
schronk
schrifen
schrinke
schrinken
schrive
schriven
schrof
scinen
scrāf
seen
segen
seghen
seien
sein
sen
seten
seth
sēthe
sē ð
sēben
sew
shake
shinen
shook
shrink
shrunke
shrunken
siew
singe
singen
sinke
sinken
siten
sitte
sitten
slæn
slagen
slain
slang
slawen
slēan

slee
slegen
sleu
slingen
slinken
slogh
slōh
slong
slouh
slunge
slungen
slunken
smāt
smat
smite
smīten
smiten
smot
soden
song
sonke
sowe
sowen
spæk
spǣten
spǣtte
spake
span
speke
speken
spette
spinne
spinnen
spitte
spitten
spocen
spoken
sponne
sponnen
sprang
springe
springen
sprong
sprunge
sprungen
stál
stande
standen
stang
stank
stele
stelen
sticke
sticked
sticken
stingen
stinke
stinken
stōd
stolen
stong
stood
strāc
strād
strang
strengen
streven
stride
strīden
strike

striken
strived
strivede
strīven
strōk
strood
strook
strung
stungen
stunken
sunge
sungen
sunken
swal
swam
swang
swelle
swellen
swere
swerien
swimme
swimmen
swinge
swingen
swolle
swollen
swong
swōr
swor
sworen
swummen
swungen
take
tāken
taken

tar
tere
teren
tōk
tore
toren
trad
trede
treden
troden
þrāf
þrawe
þrāwen
þrēou
þrewe
þrīfen
þrive
þriven
þrof
þrowe
þrowen
urnen
waf
wan
wand
wenden
weorede
were
wered
weren
weven
winde
winden
winnen
wof

wond	begun
wonden	bet
wonnen	bid
wounden	bidden
woven	bind
wunne	blew
wunnen	blow
wunden	blown
wrang	bore
wrāt	borne
wrat	bound
wringe	brang
wringen	break
writen	bring
writen	broke
wrong	broken
wrot	brung
wrungen	came
	choose
MnE.	chose
abide	chosen
abidden	clang
abidded	clave
abode	cleave
ate	cleaved
awake	cling
awaked	clung
awoken	come
bade	crew
band	crow
bear	crowed
beat	crown
beaten	dare
began	dared
begin	did

dig
dive
dived
do
done
dove
drank
draw
drawn
drew
drink
drive
driven
drove
drunk
dug
durst
eat
eaten
fall
fallen
fell
find
flay
flew
flog
floggen
flown
fly
forsake
forsaken
forsook
found
freeze
froze
frozen
gave
get
give
given
gnaw
gnawed
gnew
go
gone
got
gotten
grew
grind
grow
grown
ground
hang
hanged
heave
heaved
held
hold
hove
hoven
hung
knew
know
known
lain
lay
lie
malt
melt
melted
molten
ran

rang
ride
ridden
ring
rise
risen
rode
rose
run
rung
sang
sank
sat
saw
see
seen
seethe
seethen
seethed
shake
shaken
share
shared
shear
shine
shined
shone
shook
shore
shorn
shrank
shrink
shrive
shrived
shriven
shrove
shrunk
sing
sink
sit
sitten
slain
slang
slank
slay
slew
sling
slink
slung
slunk
smite
smitten
smote
sod
sodden
sow
sowed
sown
span
spat
speak
spin
spit
spitten
spoke
spoken
sprang
spring
sprung
spun
stand
stang

stank
steal
stick
sting
stink
stole
stolen
stood
strang
stricken
stride
stridden
strike
string
strive
striven
strode
strove
struck
strung
stuck
stung
stunk
sung
sunk
swam
swang
swear
swell
swelled
swim
swing
swollen
swore
sworn
swum
swung
take
taken
tear
threw
thrive
thriven
throve
throw
thrown
took
tore
torn
tread
trod
trodden
wear
weave
went
win
wind
won
wore
worn
wound
wove
woven
wrang
wring
write
written
wrote
wrung